Victor Sarianidi

MARGIANA AND PROTOZOROASTRISM

Translated from Russian
by Inna Sarianidi

KAPON EDITIONS

ACKNOWLEDGMENTS

The present political and economical situation in the former Soviet Union is very complicated and difficult and the lack of technical and especially financial sources negatively affects the state of archaeological research. The Margiana Archaeological Expedition that for almost a quarter of a century has been carrying out field work in Turkmenistan found itself in a position of not being able to continue its work. The financial problems have forced the administration of the Margiana Expedition to try to find sponsors who could somehow support the expedition. Greece is the only country that has done its utmost to assist the Expedition.

Apart from the support that was offered generously by individuals, one can only mention with gratitude and many thanks the financial program worked out by the Ministry of Culture of Greece.

In 1994, taking into consideration the importance of the archaeological investigations in Margiana for study of the most ancient history of Minor Asia archaic tribes, the Greece culture minister A.Mikrouchikos signed the five-year (1995–2000) treaty on the financial aid to Margiana archaeological mission of the Institute of Archaeology of the Russian Academy of Sciences.

This idea received a powerful backing from the Greece culture minister S.Benos, who has increased the rate of the financial aid, which is still in progress. Absolutely evident is the fact that without this financial aid the Margiana archaeological mission would make no excavations of such a great scale and gain such fundamental results and I want to express my heartfull gratitude to all culture ministers and to Greece.

Considerable financial support was also given by the Hospitality Center of Pontios (Mr. G.Iakovou). The money allocated by this Center covered the expenses of the Expedition during the field work of 1995. Equally we are thankful to the Society of Pontios. In 1991-1993 the field work of the Margiana Expedition was sponcered by the Ligabue Institute. In the cooperation with this Institute the Gonur necropolis was excavated.

As a result of the support rendered by individuals as well as by organizations, the Margiana Expedition was able to continue its work and was fortunate enough to find in 1995 a unique fire temple that has certain similarities with temples of Anatolia and the Mycenaean-Minoan culture. There is every reason to believe that future discoveries of the field work will be able to help a lot in solving problems of history that concern not just Central Asia but the whole of the Near East and the Aegean world. This will be a considerable contribution to the study of relations between the Near East and Greece in the period previous to the eastern march of Alexander the Great and the spread of Hellenism to the East.

The author would like to express his sincere thanks and acknowledgments to all individuals as well as to state and public organizations that helped him to carry out his scientific work.

The scientific editing was kindly performed by Prof.J.Mallory .I realise the bulk of the work he had done on his own will.The value of this voluntary editing is especially significant since Prof.J.Mallory made comments on the book that contains ideas contrary to his theory.I'd like to cordially thank him for this tremendous job.

I would also like to extend my heartfull thanks to Mrs. Ann and Mr.Ron Garner for their indispensable editorial assistance.

I'd also like to mention the great work that was done by O.Rosental and T.Khodjanijazoff who took an active part in excavations.

CONTENTS

ABBREVIATIONS

AJA -American Journal of Archaeology.
AS - Anatolian Studies.
AFO - Archiv for Orient.
J.I.E.S.-Journal of Indo-European Studies.
KSIA -Kratkie Soobshenia Instituta Archeologii.
MDP -Memoires Delegation en Perse.
MMAP -Memoires de la Mission Archaeologique en Perse.
MMJ -Metropolitan Museum Journal.
SA -Sovetskaya Archeologia.
S.A.A.- South Asian Archaeology.
TUTAKE -Trudi Uzjno-Turkmenskoy Archeologicheskoy Kompleksnoy Ekspeditsii.

CENTRAL ASIA IN THE STONE AND BRONZE AGES

CHARTER I

BACKGROUND

The natural geographic situation of present Central Asia as well as of the whole of Eurasia has little in common with the situation in these areas at the end of the Tertiary Period. In those days mountains were much lower than today, most of them being on the average about 500 m high and only some exceptional mountain chains reached a height of 1000 m above sea level. This fact favored the free access of warm and humid air from the Indian Ocean and the Arabian Sea. However, already in the Ur period one notes traces of the progressive drying out of the climate. This was caused by the sudden and gigantic rise of such mountain chains as the Kopet Dagh, Pamir and Tien-Shan. The height of these chains reached the level of three to seven thousand meters and stopped the flow of warm air into the depths of Central Asia. An anticyclical period had started and the climate thereafter was characterized by dry, hot summers and cold winters. Gradually the present day landscape has been formed and consequently the flora and fauna have also changed.

The sharp fall of temperature on the eve of the Tertiary and Quaternary Periods had naturally caused certain hydrological changes. The rise of dry land resulted in the formation of large river valleys and due to the accumulation of large amounts of water in the mountains (snow and ice), the rivers became full-flowing. It was then when the largest rivers of Central Asia, the Syr Darya and Amu Darya were formed. The Quaternary witnesses the sharp rise of the water level in the Caspian Sea and in the period of the so-called Khvalin transgression, its waters covered large areas of the Kara Kum; and the sea level was 50 m higher than the present one.

Considerable territory of Central Asia is covered by the Turan lowland that is cut through by the Amu Darya and Syr Darya Rivers. The Kara Kum and Kisil Kum, two of the large deserts of the world, occupy almost the whole of this huge territory. In the south a narrow piedmont strip richly watered by mountain streams is located between the Kara Kum and the mountain chain of the Kopet Dagh. Farther to the east run two large rivers, the Murgab and Tedjen, with their blind deltas lost in the depths of the Kara Kum desert. The Zeravshan River with its rich alluvial deposits suitable for practicing irrigated farming is located between the Amu Darya and Syr Darya. Important mountain chains, the Tian Shan and Pamir, are located in the eastern section of Central Asia. Deposits of iron, tin and silver and sometimes gold are found in different places in Central Asia.

Lower Paleolithic Age

The present archaeological data, though very incomplete, clearly prove that Central Asia was inhabited as early as the Lower Paleolithic Age. This statement is supported by finds of tools on the river Vakhsh and by the Acheulean tools found in Turkmenistan between the stations of Yangadja and Kara Tengir, in the depths of the Tian Shan in the area of Naryn. The corresponding finds in the basin of the Syr Darya and in south Kazakhstan date back to the very late period of the Lower Paleolithic Age.

Though at present science does not possess complete data on this matter we are convinced that two cultural traditions existed in Central Asia during the Lower Paleolithic Age. One of them in the southwestern part of Turkmenistan was characterized by handaxes. The other one in the northeastern region was marked by tools of a chopper type, a fact that speaks of parallels between this huge area and southeast Asia. Based on these facts one can even conclude that already at that time cultural evolution had taken two different paths: an east Asian path, on the one hand, and a Mediterranean and African one on the other. In other words it is suggested that primitives from the eastern part of Central Asia show closer similarities with Peking man while those from its southwestern area have parallels with the inhabitants of Europe, Africa and possibly of the Near East.

Middle Paleolithic Age

The Mousterian sites characterize best of all this period of the ancient history of Central Asia and are represented now not only by open-air sites but by caves as well. In Turkmenistan, people of this Age used open-air sites on the Krasnovodsk peninsula, in the Lower Vakhsh, in the valley of Isfara and in the basin of Syr Darya. But undoubtedly the famous cave of Teshik Tash in the Baisountaou mountains gives the fullest representation of the people of the Mousterian period. The people who lived there were hunters of Siberian goats in the neighbouring mountains and of deer, horse, bear, hyena, leopard, hare and other rodents and birds in the foothills and valleys.

The people who lived in these caves, or in other words, the Neanderthals, inhabited them for a long time. Along the cave walls there were found fires used for preparing food. Sitting by these fires people made their tools using the local siliceous limestone. This limestone was used by artful craftsmen of that time for making scrapers, sharp points and burins.

The most remarkable find in the Teshik Tash cave is the famous burial of a boy which clearly witnesses the fact that people of the Mousterian Age followed certain burial ceremonies. On top of the tomb they had arranged mountain deer horns in the shape of a ring, which points to the existence of a certain rather complicated burial ceremony.

The sites of the Mousterian period were no longer isolated from each other. It is clear that people preferred to settle closer to each other and the Amir-Temir cave situated next to the Teshik Tash cave is the best testimony to this statement. It is quite probable that this cave was used as a place where small travelling groups of Mousterian hunters took a short rest.

Another Mousterian cave, the Aman Koutan, was found on the west side of the Zeravshan mountain chain, near Samarkand. The cave was undoubtedly inhabited since it has preserved signs of fire as well as different stone articles and bone tools which were found in it. The Teshik Tash inhabitants hunted mainly mountain goats since the cave was hidden deep in the mountains. The Aman Koutan hunters living lower in the middle zone of the mountains generally hunted muflons and gray bears. Caves of a similar type were also found in the mountains near Tashkent in the basin of the Chirchik River. The excavations of such caves as Khodjikent I and 2 showed that the central place was occupied by a hearth, suggesting that a common fire had been used for preparing food including meat of mountain goats. People of the Mousterian period settled not only in the mountain zones but inhabited alluvial plains as well, such as Kaskir Boulak on the Krasnovodsk Peninsula and places nearby. Similar sites are also found in the lower section of the Ouzboi, near the Bolshoi Balkans, and in the south in Tadjikistan (Kara Boulak).

Thus, hunting and occasional gathering represented the basis of a paleoeconomy of those who inhabited open-air sites and caves in the Mousterian period. The act of gathering itself can be interpreted as a sign of transition from a nomadic to a settled way of life.

Considerable changes in ideology and psychology of the Mousterian people are shown by the above-mentioned burial of a boy at the Teshik Tash cave. The burial can be interpreted as a sign that Mousterian people came to understand that death qualitatively differs from life. In other words, they had acquired the first ideas that served in the future as a basis for developing diverse mythological representations, as well as different burial processes characteristic of the people of the Upper Paleolithic.

Though the Mousterian population was sparse and their small groups were scattered, they still had contacts with the inhabitants of remote areas. According to one scientific hypothesis the people of the Late Mousterian culture in Central Asia had links with people of the Near East, especially with the Mousterian inhabitants of Iran, Iraq and Palestine. At the same time the materials that come from Kara-Taou indicate that Kazakhstan people belonged to another cultural and ethnic circle that was more characteristic of the inhabitants of the Lower Paleolithic of east Asia.

Upper Paleolithic

Though in Central Asia the Upper Paleolithic sites are not numerous, they are nevertheless diverse. The people who lived on the Krasnovodsk Peninsula manufactured flints in their workshops and the technique they used was close to that of the cave settlements in Palestine. The open-air sites excavated in Samarkand, besides numerous flints, had also preserved a lot of bones of wild horse which was the main object of hunting for the local Upper Paleolithic people.

In addition to Uzbekistan and Turkmenistan, a few Upper Paleolithic sites were also found in Tadjikistan (Kisil Kala on the Vakhsh River, Khodji Gor), in the valley of Isfara and in other places. Based on these materials, scholars came to the conclusion that inhabitants of these sites had contact with tribes that lived in south Central Asia, the Caucasus, Crimea, Iran, and the Near East.

Open-air sites and settlements are also known in Kazakhstan (Kara Taou, Sorkul). The sites found in east Kazakhstan show close similarities with contemporaneous sites in Siberia. The available material makes it possible to believe that the Upper Paleolithic sites of Turkmenistan, Uzbekistan and Tadjikistan belong to the circle of the south "Oriniak-type" cultures while those from Kazakhstan and especially from east Kazakhstan reveal links with the most ancient cultures of the northeast circle.

Mesolithic Period

The material culture of the people who lived in Pre-Caspia and the Amu Darya basin in this period was characterized by implementation of microlithic techniques and by the wide application of geometric tools in their everyday life. This fact witnesses to close similarities between these people and the ancient inhabitants of south Asia. At the same time the culture of the mountain inhabitants of the Tian Shan and Pamir in the eastern part of Central Asia was linked with that of north and east Asia. This fact suggests the mixing of the residents within the contact zones.

From a historical point of view, the invention of the bow and arrow was a very important event of the Age since it brought about significant hunting changes. This invention begins an important new step in the hunter's practical knowledge of the environment and physical laws. To a certain extent changes in hunting habits pushed the Mesolithic tribes of the south to transfer from food-gathering to cultivating plants, in other words to farming and domestication of animals. For their part, inhabitants of steppe and mountain areas were gradually transferring from hunting wild animals to stock-breeding.

Farming Neolithic Period

The new trends that were gradually maturing deep within human communities during the Mesolithic Period finally took their complete shape in the very southwest edge of Central Asia. There the first really settled farming tribes of the so-called Djeitun Neolithic culture appeared on the narrow strip of fertile land on the Kopet Dagh plateau. The lowlands of the piedmont of Kopet Dagh have a dry climate with a low rate of precipitation. At the same time there are several small rivers and constant streams running down from the mountains that bring sufficient water, especially during spring floods. And it was here on these well-watered lands where the early settlements of the first farmers of Central Asia were located.

The first farmers built their permanent settlements in the territory from Kizil Arvat to the west of south Turkmenistan (Bami settlement) and up to east Turkmenistan (Chagylly, Mondjukly). The earliest settlements of the seventh to sixth millennium B.C. are situated on the west and those of the later period, that is of the fifth millennium B.C., are on the east, thus demonstrating the gradual process of the settling of tribes of the Neolithic Djeitun culture.

During this process the first farmers started to build their permanent settlements in the delta zone of rivers of mountain origin, as well as on the natural elevations of the piedmont strip of the Kopet Dagh. Their houses were built of clay blocks (in the shape of cylinders), heavily tempered with chaff straw. This kind of "protobrick" was 60-70 cm long and the oval section was 10-25 cm in diameter. The walls of houses built with this brick were up to 30 cm thick. The walls were covered with clay plaster and sometimes painted red or black and floors had a hard beaten surface.

The Djeitun culture houses had a standard layout and reveal a surprising uniformity. They are almost square in plan with narrow doorways that were apparently curtained with mats or animal skins. Inside the houses on the right of the doorways there are large rectangular fireplaces made of the same clay "cylinders". Sometimes near these fireplaces the ancient people made special depositories for the storage of ashes, a fact that speaks of a rather sophisticated everyday life style. Between the door and the fireplace of the houses there was a walled section that is considered to be used for some auxiliary purpose (Fig. 1).

Opposite the fireplace wall there was a special projection with a small niche that could have possibly been used as a stand for a stone or ceramic human or animal figurine that had a cultic purpose. In many houses these projections were painted either red or black, stressing their special purpose.

All the houses of the Neolithic Djeitun culture had a similar standard layout with a large fireplace to the right and a projection with a niche to the left of the doorway. The area of each house varies from 13 to 39 sq. meters, and including a courtyard and auxiliary buildings, it comes to 25 sq. meters on average. This standard planning is repeated throughout the whole territory of south Turkmenistan. An average area of one settlement varies from 4000 to 5000 sq. meters. Each house was occupied by one family that consisted of five to six members. Based on the archaeological material we can say that the economy of the Djeitun culture tribes was communal rather than individual. Each settlement was inhabited by a kindred tribe and every paired family occupied a separate one-roomed house.

The invention of the bow being a turning point in the history of the Mesolithic period, the same role is attributed to the production of pottery in the following Neolithic Age. This very early pottery is far from being perfect; its shape is simple and primitive and the poor quality of firing suggests that it could have been done by any commoner in the family. The Djeitun pottery was handmade manufactured of clay with chaff additions. Prior to firing, the surface of the ware was carefully polished. In some cases it was decorated with painted red patterns of simple, wavy or bracket-like lines. With the passing of time, the pattern was lost and the lines gradually transformed into wavy patterns that completely covered the whole body of the vessel. During a later stage, a pattern of horizontal rows of triangles became more popular, the handmade pottery reaching its peak of popularity in the following Eneolithic Age.

But the most widespread and common type of pottery used in everyday life was undoubtedly represented by simple, unpainted ware. This was usually pottery made in the shape of cubes, open bowls and peculiar rectangular vessels, that we call dishes.

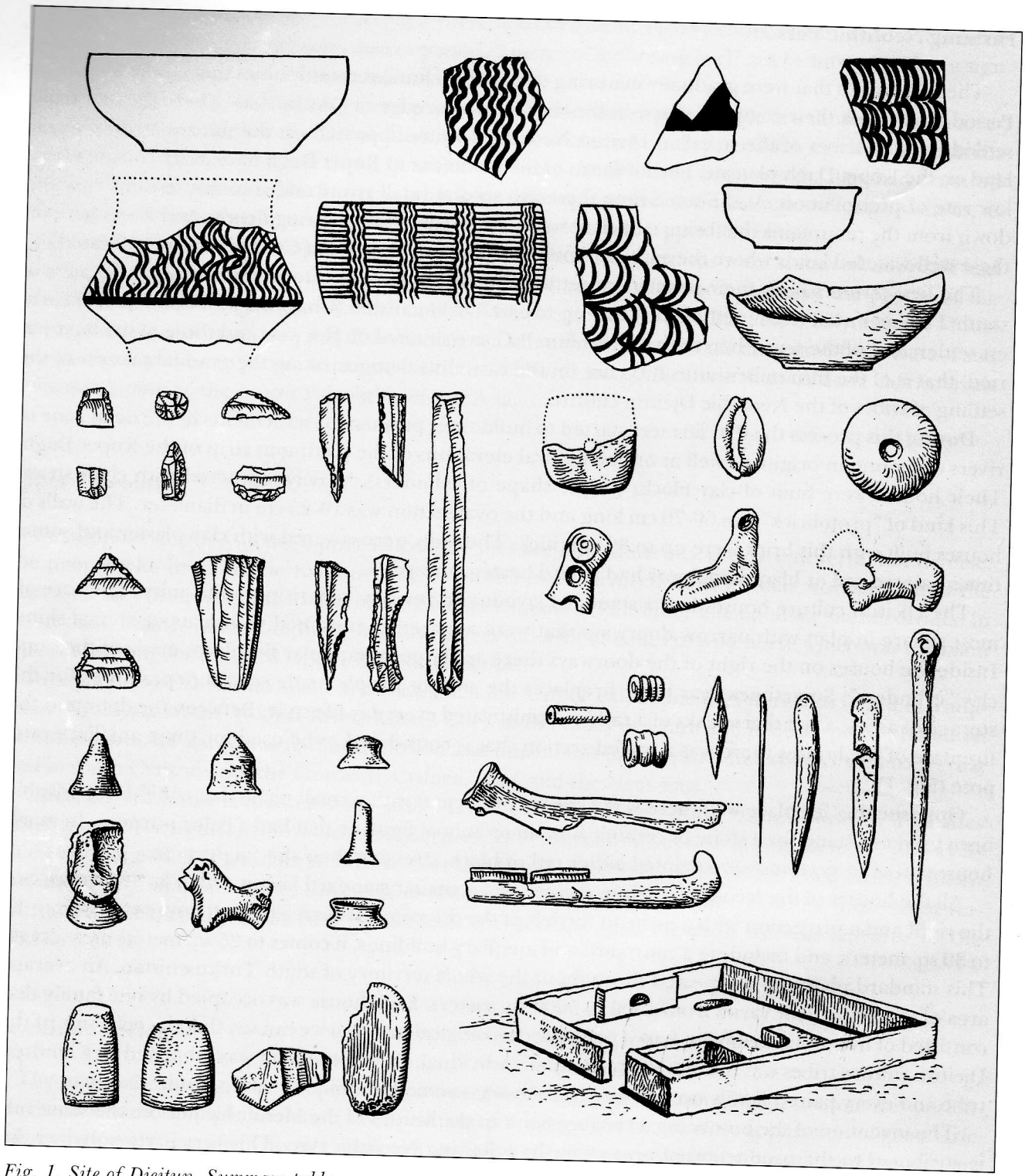


Fig. 1. Site of Djeitun. Summary table.

In the same period the Djeitun people widely used various stone tools made in the traditions of the flint blade industry of the Mesolithic period. Alongside these usual stone tools there appeared new and therefore unknown ones: flint blades combined into sickles. One such bone sickle was found at Chopan Depe, it had a slot where flint blades with sharp edges were inserted. Lots of flint scrapers were manufactured to be used during skin processing. A variety of scrapers was in use for processing wooden tools, and drills were used for making stone tools.

Animal scapula were used by the ancient Djeitun people for manufacturing tools for processing skins and thin bones were used for making different borers, needles and awls. Querns, pestles and mortars were made of

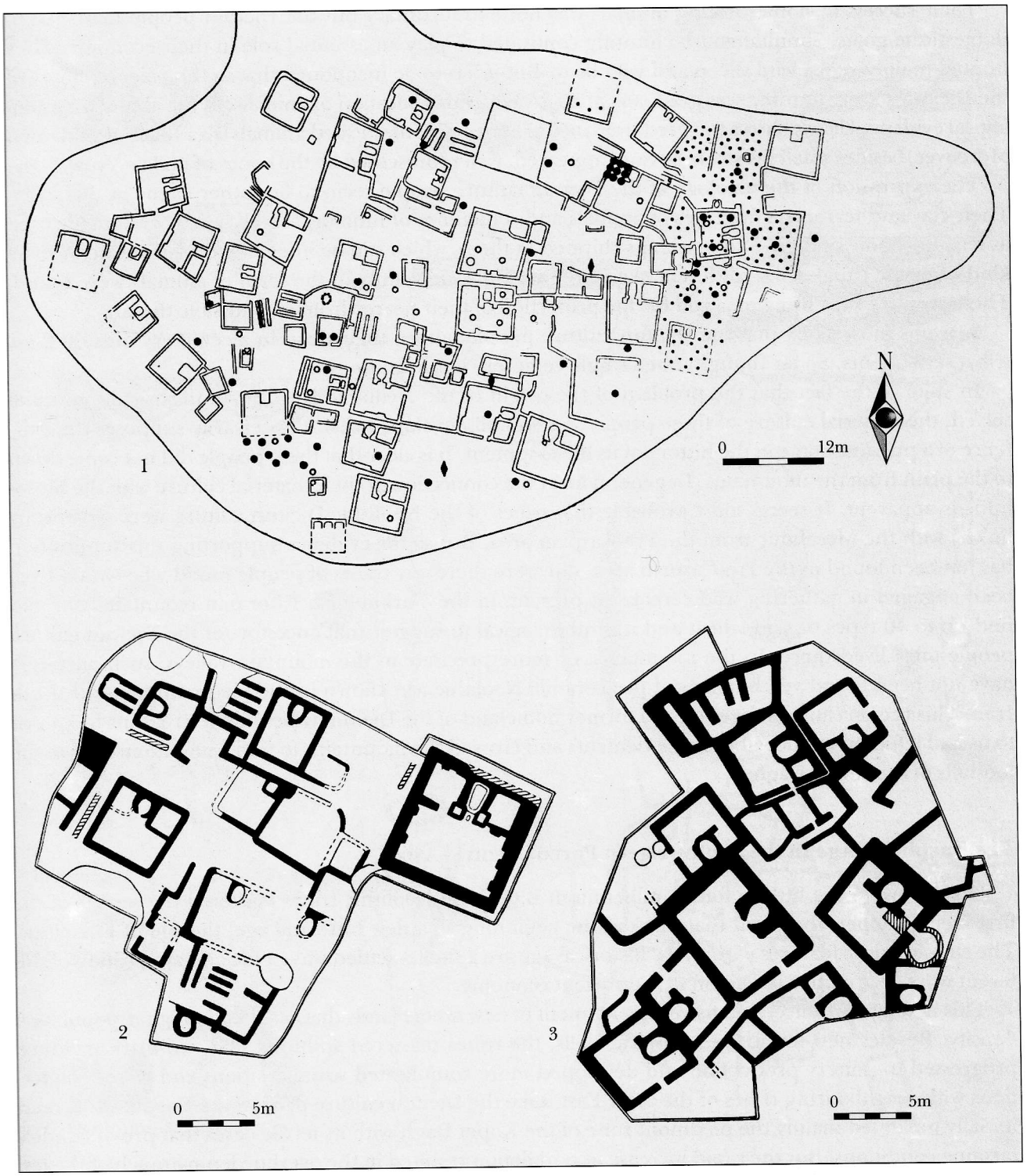


Fig. 2. Sites of Djeitun (1), Chagylly (2) and Pessedjik (3).

sandstone, and soap stone was used for miniature axe-adzes, the so-called arrow-straighteners and other tools.

The Djeitun culture people became steady settlers who grew wheat and barley on the fields next to their dwellings. It should be noted that besides two-row barley they cultivated also two types of wheat: the soft and the dwarf. Certainly it was due to their farming activities that the Djeitun people finally settled down and began to live on permanent sites, a fact that is shown by the existence of thick cultural levels up to 6.5 m.

The location of the Djeitun settlements is not at all accidental. The people chose such zones where deltas of mountain streams contacted sand dunes of the Kara Kum Desert so that they could use this water for primitive irrigation of their fields, for example Pessedjik-Depe (Fig. 2, No 3) or Chagylly-Depe (Fig. 2, No 2).

Their success in domesticating animals was not extraordinary but the Djeitun people managed to domesticate goats. Simultaneously, hunting continued to play an essential role in their economy. They hunted mainly goats, wild sheep and wild boar. But it has to be mentioned that in the paleoeconomy of the Djeitun society hunting was gradually giving way to domestication of animals, as the abundant osteological evidence clearly shows the predominance of bones of domesticated animals over those of wild ones. Moreover, besides small livestock, bovines appeared, well represented by the bones of bull and cow.

The expression of the ideology of the Djeitun culture people seem to be rather vague at this stage. Their clay and terracotta figurines of animals and sometimes of humans as well, were presumably used as fetishes. Some of them had markings chipped in them, which can be interpreted as evidence of some kind of magic rituals. Also, different clay and bone amulets mainly in the form of animals were found. These amulets were hung on a rod for the protection of their bearer from any possible threat.

It seems most likely that the Djeitun culture people buried their dead in a cemetery outside their tribal settlements. So far though, not a single cemetery has been found.

In spite of the fact that the problem of the origin of the Neolithic Djeitun culture is still not quite solved, the material culture of these people was so well developed that it necessarily supposes the existence of a previous stage in the history of its development. It is clear that these people did not come down to the plain from the mountains. In general form the connection of their material culture with the Mesolithic is apparent. It seems most probable that tribes of the Neolithic Djeitun culture were genetically linked with the Mesolithic from the Pre-Caspian area. But so far evidence supporting this supposition has not been found in the Pre-Caspian area, nor were there any traces of people found who would have been engaged in gathering wild cereals. At present, in the Turkmenian Khorasan mountains one can find up to 40 types of wild wheat and it is quite logical to suggest that ancestors of the Djeitun culture people once lived there. In the mountains, or more precisely in the mountain valleys, such ancestors have not been found yet, but sites of pre-ceramic Neolithic are known in the piedmont areas of north Iran. This region can be suggested as a former homeland of the Djeitun tribes that for reasons unknown to us had left their comfortable old settlements and crossed the mountains to find a new homeland in the foothills of the Kopet Dagh.

The Eneolithic Age in the Southwestern Part of Central Asia

On the eve of the fifth to fourth millennium B.C., local Neolithic tribes mastered the secrets of the first metal, copper, the event that marked the beginning of a new historical age, the age of Eneolithic. The characteristic features of this new historical age are a stable, settled way of life and application of different ways of primitive irrigation in the ancient economy.

This new age produced intensive development of new arable lands that resulted in higher population density. Besides new-found metallurgical skills, the tribes mastered spinning and raw-brick molding, progressed in pottery production and developed more complicated social relations and closer connections with neighbouring tribes of the Near East. Like the Djeitun culture people, the Eneolithic farmers initially inhabited mainly the piedmont zone of the Kopet Dagh with its fertile oases that provided ideal farming conditions. But the rapid increase in population resulted in the overburdening much of the fertile lands in delta basins of rivers in the piedmont. Small settlements of the previous period found large, crowded ones existing alongside. Irrespective of the size of settlements, one-roomed houses of the Djeitun culture were gradually replaced by buildings with many rooms. The overpopulation of the river delta basins in the piedmont resulted in the economic development of lower regions along rivers and especially of the Tedjen River on its alluvial plain.

The best representation of ancient sites inhabited by newcomers from the piedmont zone of the Kopet Dagh in the period of Early Eneolithic is provided by sites in the Geoksyr oasis located in the ancient delta of the Tedjen River. As noted above, this move from the piedmont zone was stimulated by overpopulation in the south of Turkmenistan and by the lack of fertile lands in the area. In this new Geoksyr oasis homeland the south Turkmenian tribes continued to follow their old traditions in the arrangement of their new

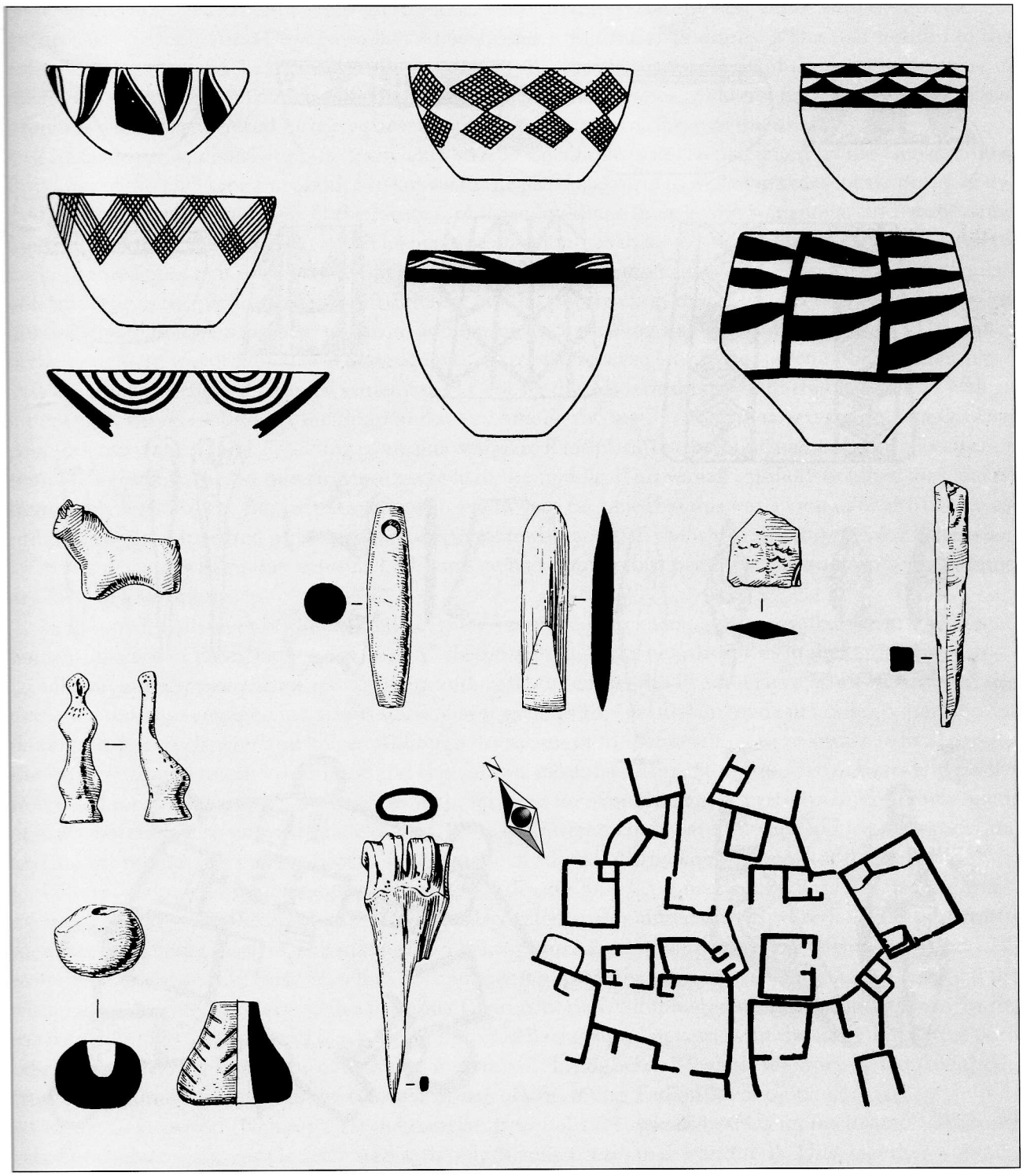


Fig. 3. Dashlidji Tepe. Summary table.

settlements. The best example of following the old traditions in a small settlement is seen at Dashlidji Depe, which belongs to the Geoksyr group of Eneolithic sites. Dashlidji Depe consisted of small houses and was fully excavated by I.N.Khlopin. As a rule, in each house to the left of the entrance was a square hearth and on the other side was a specially walled section, similar to the Djeitun culture houses (Fig.3).

In the next period, the Middle Eneolithic, at least inside the Geoksyr group of sites, the settlements consisted of one-roomed houses (Yalangach-Depe, Mullali-Depe and Akcha-Depe). But this time the sites were encircled by defensive walls with round towers along the walls with entrances leading inside the settlements. The exact purpose of these towers (or round rooms, rather) remains unclear, since their

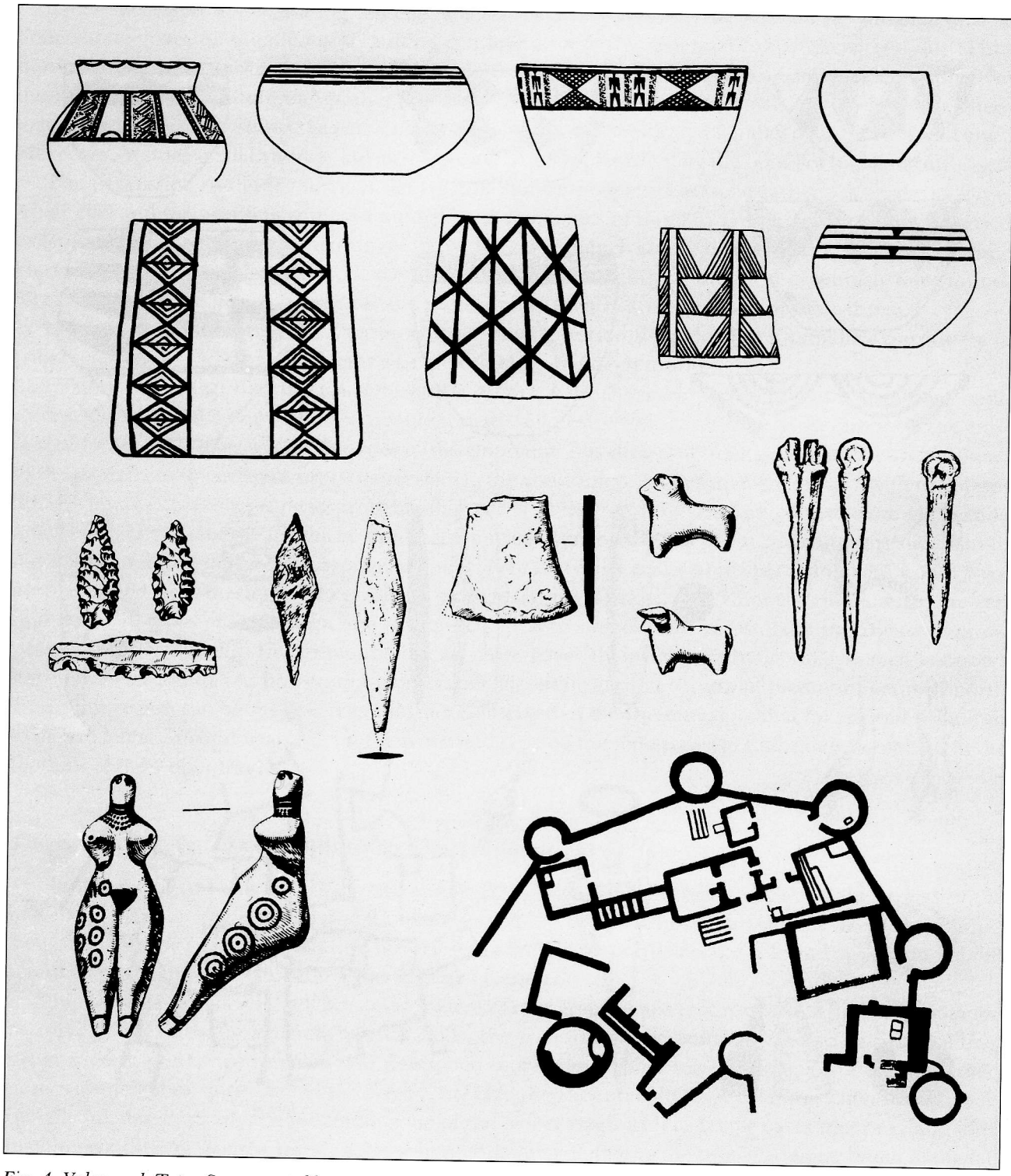


Fig. 4. Yalangach Tepe. Summary table.

cultural deposit does not differ practically from that in common rooms. Among the buildings of Yalangach-Depe one's attention is caught by a large and obviously important room with unusually thick walls and a two-part brazier built in the floor. In the early stage of its existence a slightly burnt special anthropomorphic silhouette protruded from one of the walls. This silhouette together with the brazier-podium leads one to believe that this was used as a shrine by all the inhabitants of the settlement (Fig. 4).

A similar layout was also found at another Geoksyr settlement at Mullali Depe where people also lived in one-roomed houses with rectangular hearths in the corner. Here too the people built special rooms that differed in size from the rest of the premises and had thicker walls and a brazier-podium made in the

floor. There is almost no doubt that these rooms were used as tribal shrines. Other sites of the Geoksyr group (Akcha-Depe, Aina-Depe) also had such shrines with brazier-podiums, a fact that testifies to the existence of rather widely accepted cult ceremonies and rituals characteristic of the local population in the fourth millennium B.C. It does not mean though, that these rooms could not have been used as public premises which is suggested by their sizes, they were three times as large as the usual houses.

The layout of settlements of the Early and Middle Eneolithic is well represented by the Geoksyr sites. Buildings of the final Late Eneolithic are known in the piedmont strip as well as in the Geoksyr group of the Tedjen River delta. Regardless of the location of these buildings their layout was similar and at the same time differed from the previous ones. The major innovation was that one-roomed houses were replaced by multi-roomed ones that undoubtedly speaks of cardinal changes in social life. Thus, in the large settlement of Kara Depe in the piedmont zone 130 different buildings were excavated. The buildings included several multi-roomed houses, separated one from another by thick dividing walls or by narrow streets. The center of the settlement was occupied by a large square that probably served for public meetings and gatherings.

Very similar to this is the capital settlement of Geoksyr that also consists of multi-roomed houses with an inner court, various subsidiary buildings and so on. Among the regular living quarters the ancient Geoksyr people constructed a special building of an almost square floor plan. The building had a ceramic floor with a centrally located bordered pise circle with a hole in the middle. This was all carefully polished and looked thoroughly burnt by the time of excavations. It seems very possible that this was a kind of altar (such an assumption is also supported by the ritual character of finds), and that the whole structure served as a shrine.

Also noteworthy is another unusual building that had remains of a primitive kiln and can be considered as a kind of a workshop.

In the small settlement of Chong Depe of the same period, archaeologists excavated five multi-roomed houses and each of them had its own "family" shrine with the same hearth-disk as in the capital Geoksyr.

Like their ancestors, the ancient farmers and cattle-breeders who lived in large as well as in small settlements were also engaged in various subsidiary trades. Skillful craftsmen made not only copper decorations but copper awls, axes and knives. Although the secrets of copper-smelting were known to local people, they still continued to use stone, bone and clay for tool manufacturing. Stone querns, mortars and pestles were used for grinding flour, while sickle teeth, scrapers for skin processing, arrow points, different kinds of drills, borers and so on were made of flint. Bone tools were mainly used for skin and leather processing and are represented by pierces, borers, knives made of animal ribs, by knitting hooks and so on.

Pottery, though of better quality, was still handmade and fired in simple kilns. Besides the mass, everyday pottery a few examples of fine ware decorated with painted friezes were found. Local craftsmen, far from being masters, still managed to manufacture high quality pottery with thin walls and well-proportioned forms. On early vessels the ornamentation patterns were still very simple and reflected the traditions of painted pottery of the previous Djeitun period. Simple geometric designs (mainly in the form of triangles) were painted black on the light red background of vessels. In the Early Eneolithic period (Namazga II) the same type of ceramics was spread throughout the whole territory of Turkmenistan, from the piedmont zone up to the Geoksyr group of sites in the Tedjen River delta.

In the next period (Namazga II) the eastern group of sites reveals besides monochrome ware some rare but characteristic vessels decorated with polychrome friezes (black and red). This, together with new types of ornamentation patterns may mean that pottery production was influenced by the culture of neighbouring areas. Relatively similar ornamental friezes made in polychrome technique are found on pottery from southeast Iran (Tal-i Iblis), a fact that can be interpreted as a proof of the existence of certain historical relationships between these areas.

In the Late Eneolithic period the connections between tribes in the field of pottery production took rather general forms. But in the Late Eneolithic period (Namazga III), the history of south Turkmenian tribes had developed two different trends —that is, of west and east tribes. Historical changes in the eastern group of sites are clearly characterized by the introduction of a new style in pottery production when simple monochrome designs were replaced by ornamentation of the so-called Geoksyr style. This new type of ornamentation involves the decoration of pottery friezes with cross-shaped figures, tooth-like

bands, triangles, rhomboids painted black or very intensive red that sometimes acquires a shade of lilac.

The sudden widespread introduction of a new ceramic style together with some other innovations – which first of all include the appearance of a so far absolutely unknown ritual of burial in vaulted tombs – give every possible reason to believe that this area was infiltrated by newcomers. The eastern group of sites is located in the area that starts from the large site of Ulug Depe near the railway station at Dushak up to Altyn Depe and Ilgingli Depe in the far eastern part of Turkmenistan. It should be noted, that where it was possible to trace the new ceramic style was accompanied by the introduction of the new custom of burying the dead in vaulted tombs.

Though it is difficult to establish definitely the place from which these tribes came to east Turkmenistan, it is believed that most probably they originated from southwest Iran. In that area they used ceramics of the Tal-i Bakun type that find clear analogies with the Geoksyr pottery, and further, vaulted tombs from Elam show rather close parallels with the Geoksyr tombs.

At approximately this period of time, the ceramic art of the western group of sites was clearly influenced by the pottery from Iranian Khorasan –chiefly of Tepe Hissar. In the decoration of local pottery there were widely used various zoomorphic motifs of a clearly Iranian origin. But unlike the eastern group of sites these contacts and innovations were limited only to the sphere of pottery production. One cannot suggest any kind of tribal invasion from south Iran in this case and should speak only about cultural contacts that naturally existed between neighbouring sites. However, it was at the end of the fourth millennium B.C. that ancient people of Turkmenistan established close relations with neighbouring Iranian tribes and with the whole of the Near East .

As has already been mentioned above, the infiltrated tribes of the eastern group had brought along their traditions and skills. According to geomorphologic studies made by G. N. Lisitsina in the Tedjen delta, there appeared a complicated irrigation system of about 3 km long. Along the channels, water from the side delta fans reached the fields of ancient farmers. This is an example of the most ancient irrigation system introduced by the newcomers in this area.

In the fourth millennium B.C. local tribes clearly demonstrate considerable progress in all spheres of their material and ideological culture. The new complicated irrigation systems clearly speak for the success in farming. Though grain was still harvested by harvest knives or flint sickle blades, the latter became more sophisticated, obtaining special flint teeth that helped tremendously in increasing the productivity of ancient farming. Herds of domesticated animals had sharply increased and included cows, goats, sheep and pigs, the smaller livestock prevailing over the bovines. Though hunting still played a very significant role, bones of wild animals account for not more that 10% from the total osteological material. Great progress had also been achieved in copper metallurgy by introducing a complex annealing technique that helped to increase the metal's hardness. The social life of the Eneolithic people became more complicated, which fact is attested to by the prevalent number of individual burials in simple pits.

Anthropological studies show that people who lived in this area belonged to the Mediterranean type. However, there is a certain difference between the people of the eastern (Geoksyr) group of sites and the western (Kara Depe) one. This difference is seen in skull structure as well as in stature and can be regarded as additional proof of the suggested influence from northeastern Iran.

Religious ideas of local tribes are represented by anthropomorphic sculpture, mainly through terracotta statuettes with accentuated female signs who are always in a seated position. In the whole of Turkmenistan these statuettes had practically the same iconographic type and most likely reflected the image of a Mother Goddess that was widespread among the ancient farmers of the Near East.

Among these cult figurines there were found "secular" figurines that most probably represented military leaders since they were all males with helmets or with military hats in some cases. Their severe and sometimes bearded faces possibly belonged to the first-rank people of the local society.

On the eve of the fourth to third millennium B.C. the Geoksyr group of sites revealed signs of desolation. Like all the rest of the rivers of Central Asia, the Tedjen River slowly but steadily changed its bed and in due time the old river delta moved many kilometers to the west of its original location. In the beginning of this process, inhabitants of the Geoksyr sites apparently tried desperately to stay in their

settlements and built irrigation channels to water their fields. But the river inexorably continued to move to the west and since it became still harder to water the fields, people preferred to abandon this oasis rather than to build new complicated irrigation systems.

Traces of people who tried to fight nature are found in different places, one of them being the Hapuz Depe settlement founded by the newcomers from the Tedjen delta area. Other tribes tried to colonize the ancient delta of another large alluvial river, the Murgab, but judging by the archaeological material, they did not stay there long. Only a few traces of small settlements were found during the excavations that show that these sites were completely deserted and that their inhabitants left them, seeking some other place to settle down.

Part of the ancient Geoksyr people could have come down to south Turkmenistan and settled on such sites as Altyn Depe, Ulug Depe, Ilginli Depe that had existed there long ago, but they could not find enough free land suitable for practical farming. Possibly due to this problem, most of the Geoksyr people travelled farther into the limits of south Afghanistan (Mundigak) and especially to Baluchistan (Quetta), where related tribes lived. The so called Quetta culture is characterized not only by the closely parallel ceramic traditions but, as well by burial ceremonies, wherein the dead were buried in collective tombs of the same type as the ones in the capital, Geoksyr Depe. Specialists have no doubt of a general similarity in the culture of the people of the Geoksyr type at the end of the fourth millennium B.C. to that from the Quetta Valley people of the third millennium B.C.

In any event, in the beginning of the third millennium B.C. the Geoksyr group of settlements was abandoned once and for all.

Hunting and Food-gathering in Central Asia

Farming and cattle-breeding tribes of the ancient eastern type with their bright and original culture had occupied the far southwest area of Central Asia in the fourth to third millennium B.C. but its still larger remaining territory was inhabited by those tribes that were engaged in hunting and food-gathering.

Thus, the Caspian area at that time was occupied by the Neolithic tribes that lived in rock shelters and caves. The cave of Djebel is the best known of them. Like their southern farming neighbours these tribes also had learned to produce pottery, but its quality was far below the Djeitun examples. The inhabitants of rock shelters and caves used flint for manufacturing their main tools of labor which included push-planes, scrapers and trapezoid implements. Later they started to produce arrow points. Their main occupation was hunting gazelles and fishing in the deep waters of the Uzboi River. These people are supposed to have started to gather some types of grain that they later ground. It is quite likely that they also made their first attempts to domesticate species of animals, a process that was not continued into the future. Besides rock shelters and caves, the local Neolithic food-gatherers and hunters left behind some traces of their open-air settlements and provisional sites.

Unlike the people of the Pre-Caspian Neolithic, those who lived in the areas of Uzboi, Sarikamish, in Choresmia and along the lower course of the Zeravshan River belonged to the so called Kelteminar culture and occupied the vast area of the northern part of Central Asia and Kazakhstan. The people of the Kelteminar culture lived in large houses that covered a general area of 300 sq. meters. They had cupola-shaped vaults made of sticks with a hole in the middle of the vaults. A large hearth was located in the center of each house and smaller ones were located along the walls. The inhabitants of such houses used local flint for making different types of scrapers, notched blades, borers or drills and a lot of arrow points.

Kelteminar pottery was handmade and shell mortar, ceramics and sand were added to the clay. This pottery is mainly characterized by tall vessels with slightly pear-shaped bodies and rounded or pointed bottoms. The surface of a vessel is almost completely covered with incised, scratched or pointed ornamentation. The pottery was of low quality and probably fired on an open fire.

In deserts the people of the Kelteminar culture hunted gazelles, red deer and saiga, while in the bushes of small river deltas they found boars, and deer. Fishing also was of great importance to these

people. In small rivers and lakes they fished sheatfish, sazan and pike. For fishing they used harpoons, fish hooks and nets, the sinkers for which were excavated in the settlements. One can suggest that between hunters and fishermen of the northern part of Central Asia and the settled farmers of the Djeitun culture there possibly existed rather close contacts in the form of exchange relations. This suggestion though needs to be confirmed by additional archaeological material.

While the largest area of Central Asia was inhabited by hunters, fishermen and food-gatherers of the Kelteminar culture, the mountainous regions of Tadjikistan were occupied by people of another culture: the Hissar. They lived either in the shelter of mountains (Ak Tangi) or in open-air camps (Kui Bulien) and did not build permanent houses. Their stone tools show that the economy of the Hissar people was mainly based on hunting and that at that time they already knew bows and arrows. Stone mortars, pestles and grinders speak for the fact that the local people were also engaged in food-gathering. In some sites coarse handmade pottery was found. These, as well as other finds suggest that people of the Hissar culture were in a transitional stage and engaged in primitive farming and also possibly made their first steps in domestication of wild animals.

There is no doubt that the Neolithic people of the northern part of Central Asia were in contact with the remote Neolithic tribes located as far away as in the southern Urals and the Ob River. But so far the character of these northern links as well as the southern ones with the Djeitun culture tribes remains unclear.

The Bronze Age in the Southwestern Part of Central Asia

Sites excavated in present Turkmenistan demonstrate further development in the history of local tribes in the Early Bronze Age. The same picture is true for the Middle Bronze Period and both of these ages correspond to the archaeological periods of Namazga IV-V that embrace the whole of the third millennium B.C. This was the peak in the flourishing of the local south Turkmenistan tribes that lived in the area from the west to east Turkmenistan. Besides some small sites, there already existed such large ones as Hapuz Depe, Altyn Depe, Namazga Depe, Ulug Depe .

Archaeological excavations show that even these large settlements had no defensive walls which can be interpreted as indirect evidence that a rather peaceful historical situation existed in that period. The inhabitants of both small and large villages lived in multi-roomed houses with neighbouring courtyards and household structures. Each multi-roomed house was separated from the other by "streets", open squares or thick walls.

Besides these household buildings, construction of temples of a monumental character had begun, but their exact purpose is not clear yet. One isolated building of this type was found in Namazga Depe. This was the structure where narrow rooms of the same type had their exits into a large square courtyard. This complex could be possibly regarded as a small temple. Remains of another building, also possibly a temple, were excavated at the other large settlement of Altyn-Depe and likely served as a shrine for the whole local population during holy days.

As before, the dead were still interred in the usual burial pits in the uninhabited areas of settlements. Recall that in the east they had followed the traditions of collective vaulted tombs that were first found in the capital, Geoksyr. Such burial constructions were also found in the settlements of Hapus Depe, Altyn Depe and will be possibly found in other ones that are yet not fully investigated. Children from the local families were often buried in large vessels and this tradition was followed still later.

At that time there appeared professional potters that worked in workshops located in special sections of settlements. The primitive one-tiered kilns of the previous period were replaced by complex two-tiered ones that required special technological skill. Progress in pottery production was not only advanced by the introduction of complex kilns but also by using a potter's wheel, which bespeaks a highly developed system of pottery production (Fig. 5).

During the first stage, the local potters continued to produce handmade ceramics and decorated them with geometric designs rooted in the traditions of ceramic art of the previous time. The invention of the potter's wheel caused the forming of new ceramic shapes including goblets with sharp ribs on short goffered stands that later became taller. The western group of sites had clay vessels with incised

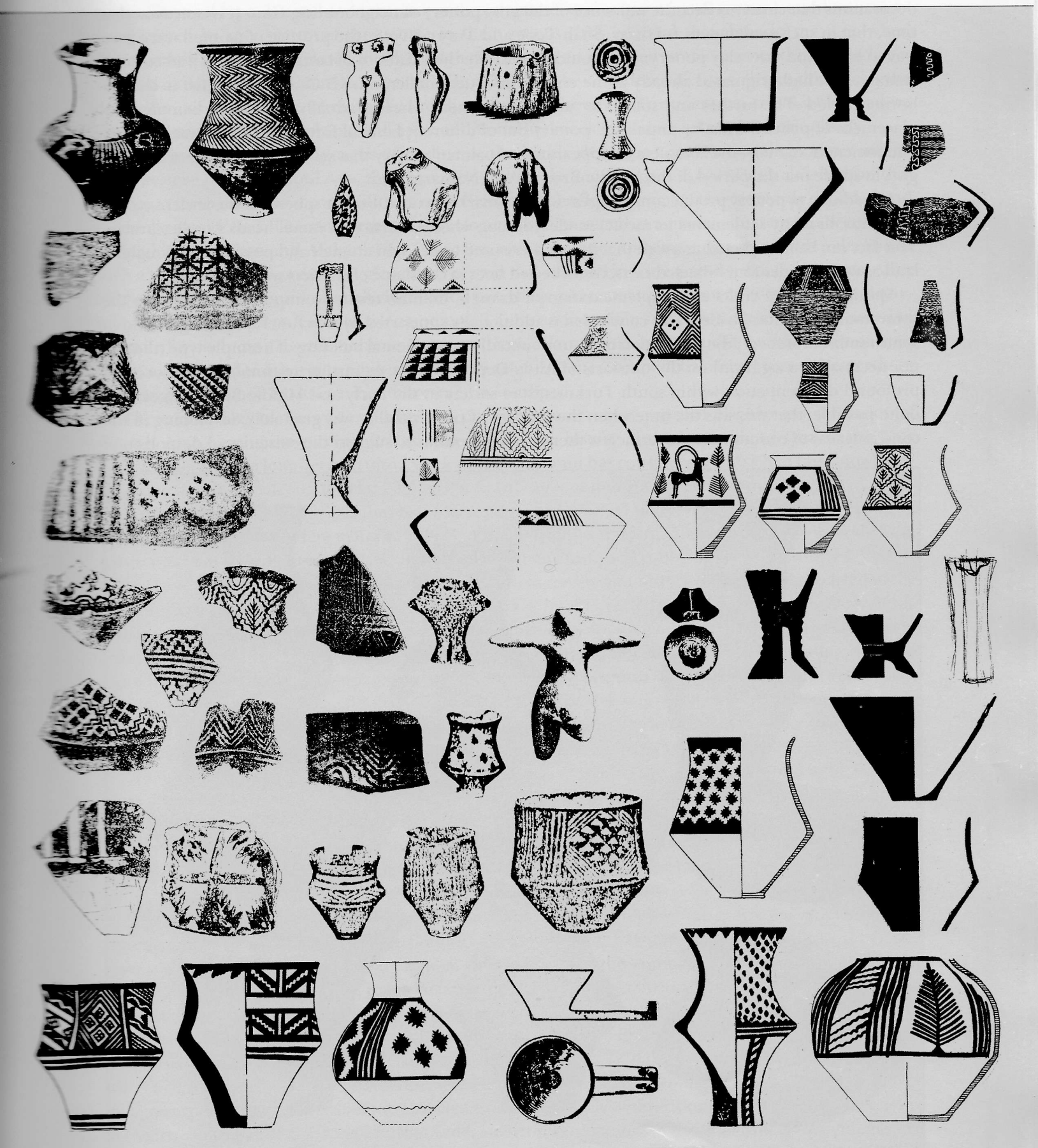


Fig. 5. Summary table of the Early Bronze Age of south Turkmenistan.

decorations that clearly reflect the influence of the gray pottery of neighbouring Iran. It is exactly at that time, that in such settlements as Hissar, Shah Tepe and Tureng Tepe, the practice of painted ware gave way to black and gray clay pottery. This could all indicate the existence of certain historical and cultural contacts that had originated already at the end of the fourth millennium B.C. and continued in the following period .The further and still wider use of the potter's wheel gradually resulted in complete replacement of painted ware by unpainted pottery but of different fanciful forms (Fig. 6). It was this very phenomenon, namely, the complete disappearance of painted pottery that serves as a basis for archaeologists to single out the period of the Middle Bronze Age (Namazga V).

In addition to pottery production, progress was also marked in all the other spheres of the ancient economy. Thus, in many settlements terracotta models of four-wheeled carts with camel heads were excavated. This fact can be interpreted as a sign that camels were used as draught animals and possibly for ploughing land as well. Besides four-wheeled carts, two-wheeled ones in the shape of chariots were also found.

Specialization of crafts and implementation of draught animals testify to important changes in the community life of local tribes. This conclusion is additionally supported by rich funeral offerings found in some tombs. Moreover, the excavation of an undoubtedly monumental building of a temple type (though not necessarily a ziggurat) on the outskirts of Altyn Depe can serve as further testimony to a process of profound differentiation within south Turkmenistan society in the Early and Middle Bronze Ages. It is quite possible, that this was the time when the concept of tribal nobility was gradually developing in the consciousness of commoners, nevertheless there are no grounds to suggest the existence of despotism of

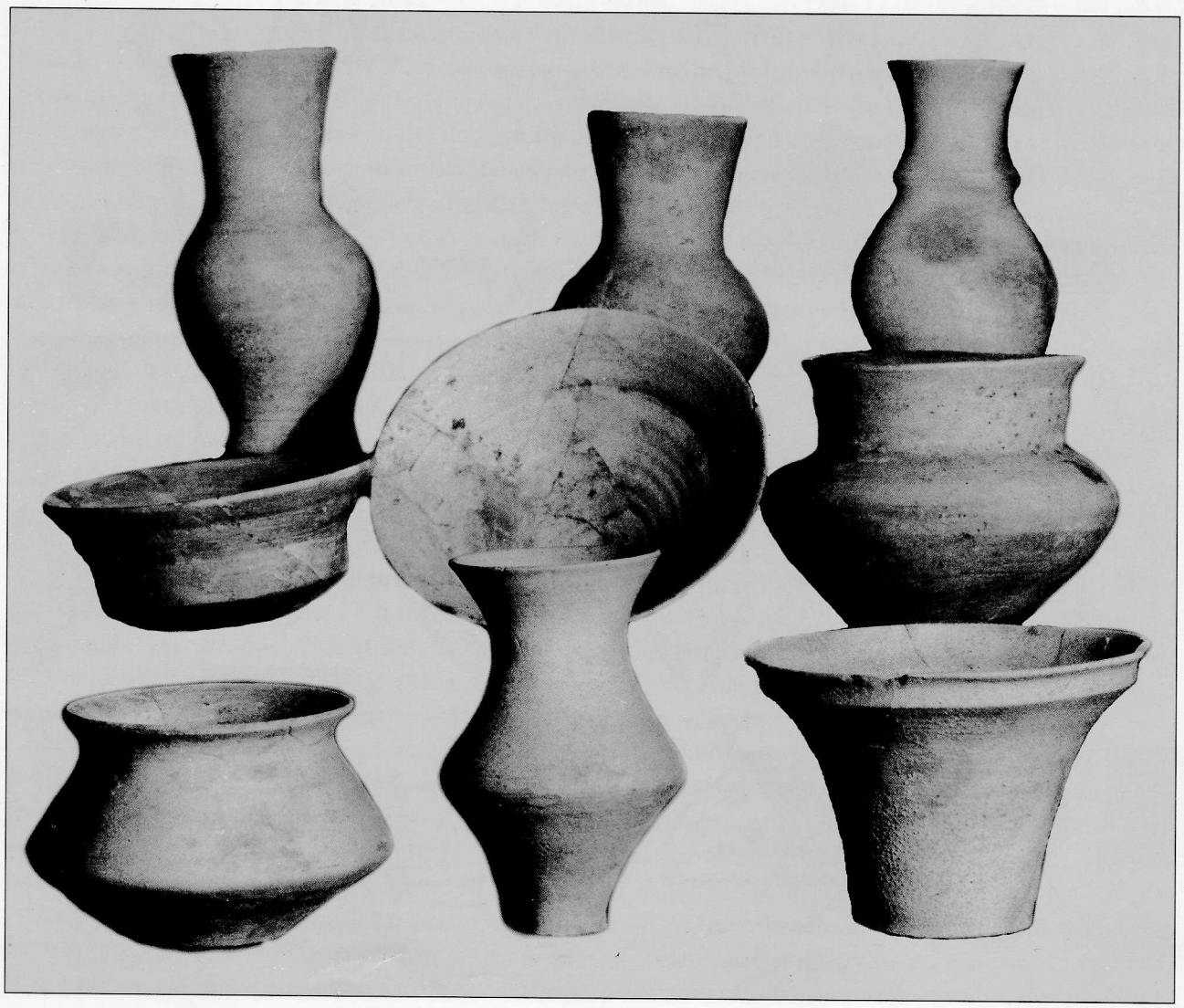


Fig. 6. Pottery of the Middle Bronze Age.

a truly Oriental type. We still cannot speak with certainty of an "origin of royal power", and local rulers were limited by sovereignty of the people in their actions. It is believed that this was the time when "proto-urban" culture originated there, though there is still an unsolved problem as to whether such settlements as Altyn Depe, Namazga Depe and Ulug Depe can be considered as cities. Just as doubtful is the definition of «civilisation»when applied to the culture of the south Turkmenistan tribes which had no writing system. All these problems still await additional archaeological data to be solved completely.

In spite of the lack of any signs of decline of the highly developed ancient farming culture in the southwestern part of Central Asia, the excavations in the piedmont zone of Kopet Dagh clearly show that on the eve of the third to secont millennium B.C. many of the flourishing oases were slowly deserted and then fully abandoned. The most recent archaeological reports state that a similar situation has been noted in neighbouring Iran and Afghanistan. There are sound grounds to believe that this sudden decline in such a large territory was due to a global arid period that resulted in widespread tribal movements. After all the mountain streams and small rivers dried out, the local farmers could not cultivate their land anymore and were forced to leave their long occupied areas and set off in search of new lands. This situation was true for such capital settlements as Namazga Depe, Altyn Depe and Hapus Depe when part of their population moved to other sites while the majority colonized the ancient delta of the Murgab River where they were later joined by other tribes that came via east Iran.

The archaeology of the western tribes of Turkmenistan occupies a special place in any discussion of Central Asia. Until quite recently it was believed that the history of the local tribes began in the Late Bronze Age. But the long-term, fruitful work of I. N. Khlopin has considerably enriched our knowledge of this area. It is revealed that as far back as the fourth millennium B.C., the southwestern part of Turkmenistan was inhabited by tribes that had the same type of painted pottery as those from the piedmont zone of the Kopet Dagh. The material culture of these tribes is unfortunately limited only to finds from tombs (and not from settlements) and for this reason many historical problems remain unsolved.

We have more sophisticated material that is related to the ancient history of the tribes who lived in the southwestern part of Turkmenistan in the Late Bronze Age (II millennium B.C.). But this material too comes mainly from tomb excavations. Nevertheless, there is enough evidence to believe that these were tribes of farmers and cattle-breeders. Due to specific geographical conditions, cattle-breeding played a more important role here, compared to the piedmont zone of south Turkmenistan with its prevailing farming economy. There is no doubt that the settlements were closely connected with the nearby cemetery. A great number of knives for manufacturing rugs was found in these tombs, the fact that undoubtedly indicates the widespread habit of carpet-making in this area (Fig. 7).

We have more data on the history of southwest Turkmenistan on the eve of the second to first millennium B.C. This is especially true concerning the tribes that lived on the Misrian plain (the culture of archaic Dahistan). People of this culture lived, both in small and large settlements in houses built of unburned brick. Such large sites as Izat Kuli and Madau had high citadels that possibly served as residences of local rulers. Common people lived in multi-roomed houses with internal courtyards. These people used a few iron objects, but most of the metal articles were made of bronze. Flint tools such as sickle blades were also used.

The pottery was wheel-made and special firing was used for achieving the gray color. Sometimes the ware was covered with black slip. The pottery as a rule was not decorated but carefully burnished. The most popular forms were those that followed the traditions of the Sumbar cemetery (one-handled jars, spouted bowls, tripods), and not the pottery traditions of northwest Iran, as was suggested earlier. The new data give every reason to reconsider the problem of the origin of the culture of archaic Dahistan in northeast Iran and to suggest the local character of the history of these tribes (Fig. 8).

The problem of the origin and the ancient history of the people of the so called culture of Zaman Baba still remains mysterious. So far, it is confirmed only by the sites in the lower section of the Zeravshan River that correspond to the first half of the II millennium B.C. People of this culture lived in pit dwellings, one of the dwellings was 23.5 m long and 9 m wide. Hearths were located in the floor and close to them were storage pits daubed with clay. The dwelling was encircled by posts, so that it gives the general impression of a half-pit dwelling with a wooden ceiling.

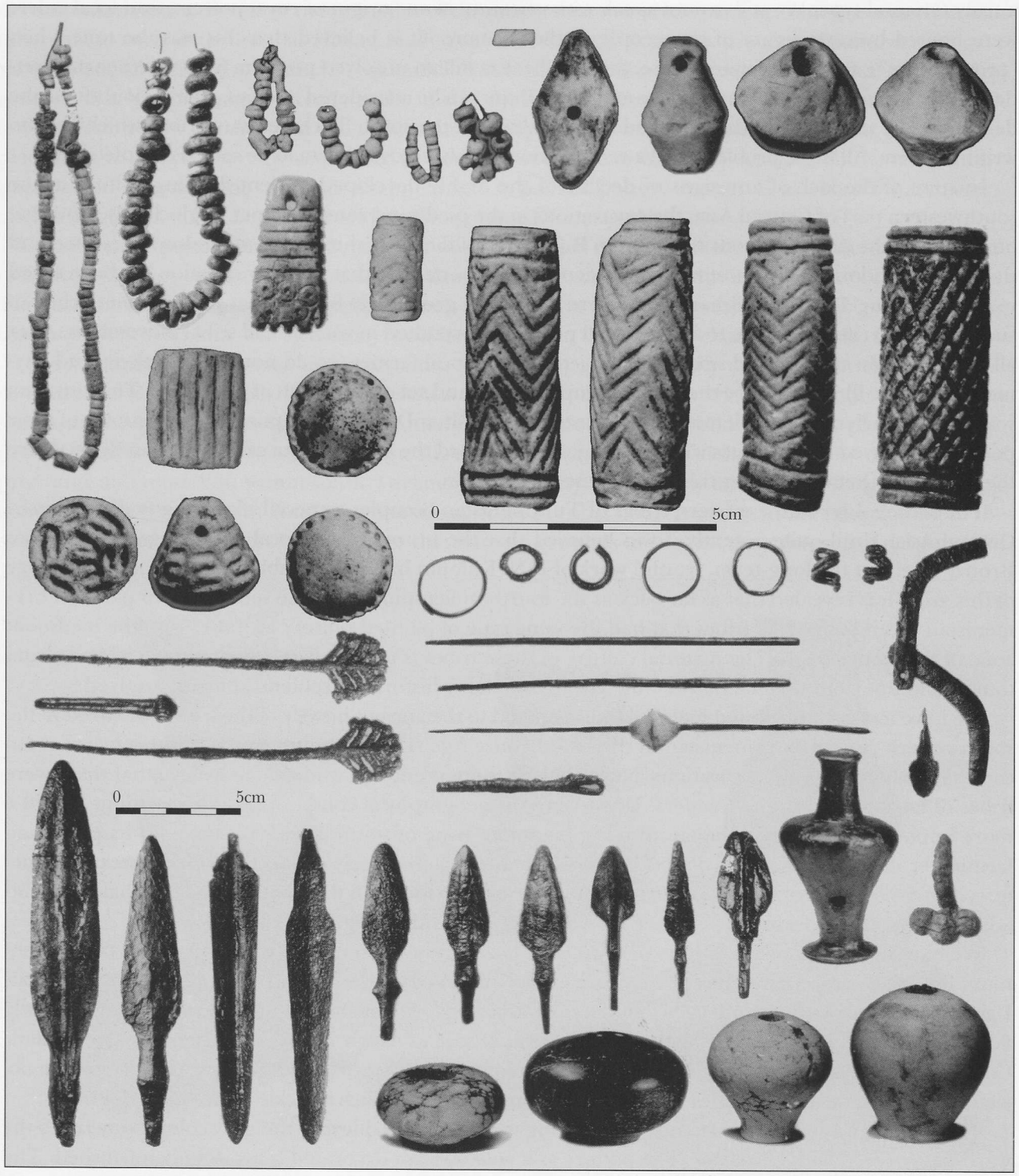


Fig. 7. Sumbar cemetery. Burial offerings and adornments.

The inhabitants of such half-pit dwellings fired their pottery in small kilns and though most of the ware was handmade, wheel-made ceramics also existed. Most of the vessels had rounded bottoms, a feature that is not typical of the pottery of settled farmers. The existence of connections with the settled farming areas in the south is proved by decorations and clearly imported wheel-made pottery. Their dead were buried in catacomb tombs in a flexed position and accompanied by funeral ware and different offerings.

The people of Zaman Baba were occupied in farming and cattle-breeding, as well as in hunting and food-gathering. Many features and indications of culture that find analogies in the culture of settled farmers of south Turkmenistan make it possible to suggest that the people of Zaman Baba had their ori-

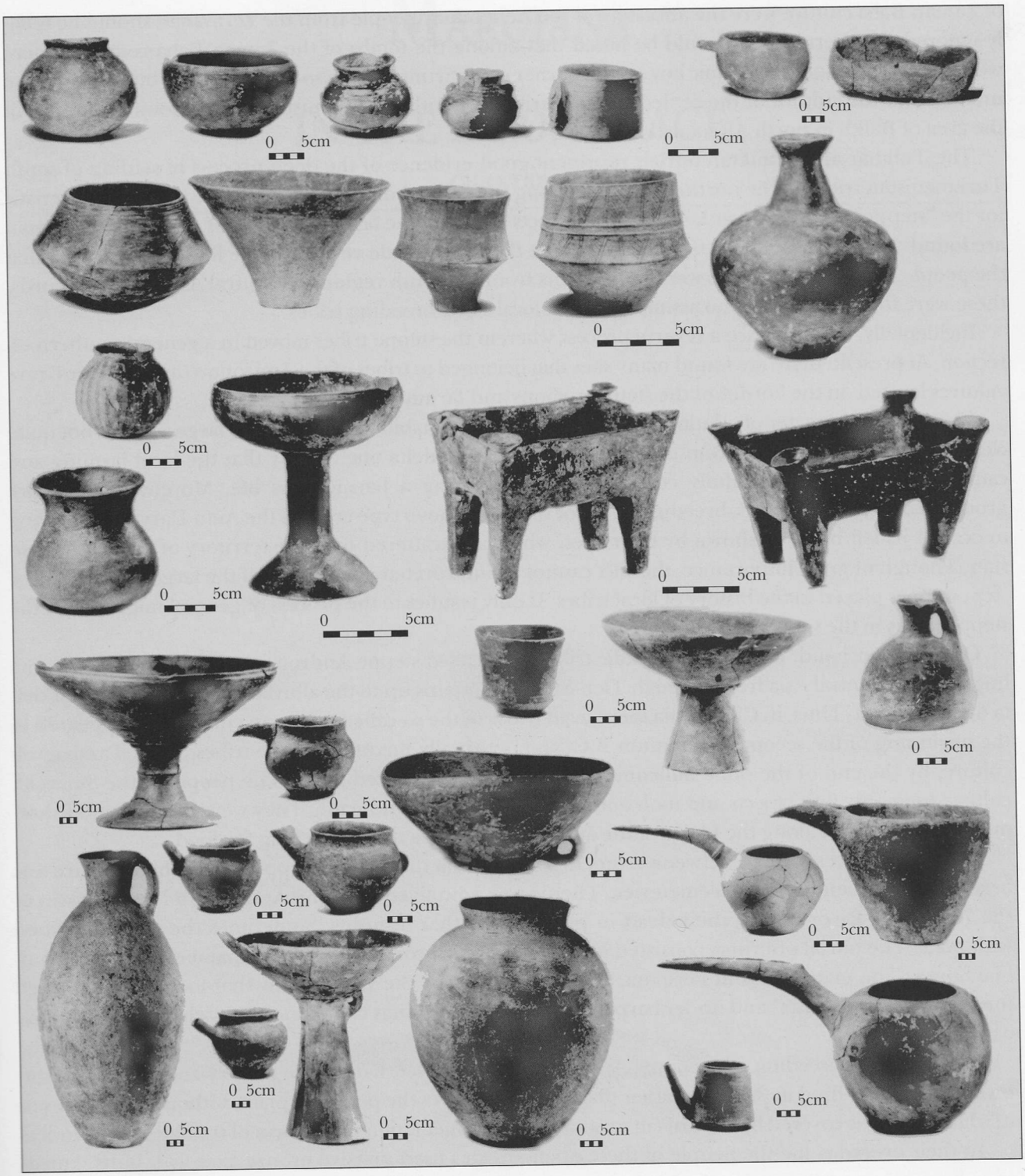


Fig. 8. Sumbar cemetery. Burial offerings and adornments.

gin in the south. It is quite possible that they were newcomers from the once fertile oases of the Kopet Dagh piedmont that had left their long inhabited places as a result of the beginning of the dry period and of a severe water shortage, as a consequence of this climate change. Similar to the south Turkmenistan tribes that at that time colonized the basin of the ancient Murgab delta, they started to develop local sections of another River, the Zeravshan. On the new lands the newcomers continued their traditional farming economy but their culture naturally became assimilated with the "steppe culture" of neighbouring tribes. In any case this suggestion may be supported by the anthropological similarity between the people of the Zaman Baba culture and south Turkmenistan tribes. And thus the suggestion that the people

of Zaman Baba culture were the ancestors of the Kelteminar people from the Zeravshan should be totally ignored. Furthermore, it should be noted that among the tombs of the Zaman Baba cemetery there were found some square ceramic boxes with corner compartments, the so-called incense burners that are unknown in the culture of the settled farming tribes of south Turkmenistan but are found in tombs in the area of Balkh in north Afghanistan.

The Tulkhar and Arauktan burials represent good evidence of the deep process of settling of south Turkmenistan tribes in the northern areas. Among the funeral offerings, besides the items characteristic for the "steppe" cultures of cattle-breeders, artifacts typical of the farming settlers of south Turkmenistan are found. Among these artifacts one should note the wheel-made vessels. These finds demonstrate that the people buried in the tombs were immigrants from the south regions of Central Asia, in other words, these were former farmers who assimilated with local stock-breeding tribes.

Incidentally, one can trace a reverse process wherein the steppe tribes moved in a general southern direction. At present, there are found many sites that belonged to tribes of the Andronovo and Timber/Grave cultures located on the border of the steppe regions and farming oases.

Though the character of relations between the ancient inhabitants of these two large zones is not quite clear yet, based on the data from the basin of the Murgab delta one can say that the local farming and cattle-breeding tribes peacefully co-existed, demonstrating a harmonious life. Moreover, there are grounds to believe that stock-breeding tribes of the Andronovo type crossed the Amu Darya River trying to occupy its left bank, as shown by their sites, which are scattered over the territory of north Afghanistan. Though of great importance, this fact cannot be interpreted as evidence of the large role that these steppe tribes played in the history of local tribes. It only testifies to the process of general migration of the steppe tribes in the southern direction.

On the other hand, numerous nomadic tribes of so called steppe Andronovo culture migrated to the huge area of Central Asia from the high Tien-Shan mountains up to the alluvial plains of the ancient delta of Amu Darya. Thus, in Choresmia there lived tribes of the so-called Sujargan culture that appeared in the beginning of the second millennium B.C. and, gradually mixing with the tribes of the Tazabagyab culture, by the end of the same millennium, completely assimilated them. The people of the Sujargan culture used only flint objects and tools and their pottery was handmade. They were hunters and fishermen who wandered along the plains of the ancient Amu Darya delta searching for food.

In various places located between rivers in Central Asia there lived steppe tribes, their culture was best of all represented in the cemeteries. The people who lived near the Aral Sea and in the basin of the Zeravshan River buried their dead in pit graves with a tumulus. Sometimes the pits were lined with mats. The burial offerings consisted of vessels, simple bronze and stone ornaments and some animal bones. The material from Fergana, Tashkent oasis and the Pamir show that local people buried their dead in "stone cists" and under barrows, their burial offerings consisting of vessels, different bronze ornaments, etc.

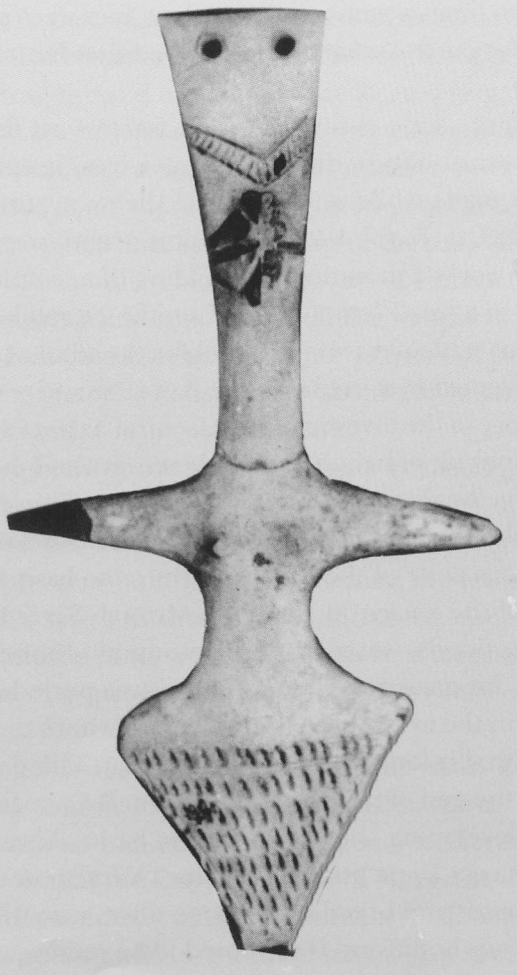
All these cattle-breeding tribes of the Andronovo culture used handmade pottery and its poor quality proved that it was fired in the open rather than in kilns. Most of the pottery is plain, without any designs on it, while the rest is covered by rows of cut or scratched ornamentation in the form of triangles or meanders.

In their everyday life the people of these open-air sites used massive bronze axes with butts, knives, swords, sickles, needles and awls. Their arms consisted of bronze spears, swords and socketed arrowheads. Among the various ornaments, one should single out bracelets, ear-rings, pendants, mirrors and beads. Rather often these bronze ornaments were covered with gold leaf. Their paleoeconomics was based on stock-keeping and mattock farming, which is shown by the fact that they settled along river and lake banks, as well as in steppe and desert areas suitable for feeding of many grazing livestock.

It seems likely that these tribes migrated to Central Asia from the west Kazakhstan regions but at the same time we cannot ignore the suggestion of their central Kazakhstan and east Kazakhstan origin. The general amorphous character of the material culture and the uniformity in the sites located so far one from another, to a certain degree hinders the reconstruction of the ancient history of the Andronovo type tribes. This complex problem still awaits new archaeological evidence.

MARGIANA IN THE BRONZE AGE

CHARTER II



The Study of Ancient Margiana

The history of the study of Margiana, the country once located in the ancient delta of the Murgab River in the far southeastern part of Turkmenistan, dates back as far as the end of the nineteenth century. In the beginning of the twentieth century, the first ancient farming settlements of the first millennium B.C. were excavated (Pumpelly, 1908). Some incidental studies were done later in this century, but not until the middle of the century were sites of the Late Bronze Age found which were seriously studied in a special monograph (V. Masson, 1959). In this very period the author of the present work made his exploratory diggings and discovered the Auchin settlement that was the capital of the Auchin oasis. This started the discovery and study of the country of Margush.

But in 1959 even these relatively scanty studies of Margiana were interrupted and again resumed only in the spring of 1972 when a Margiana Archaeological Expedition of the Institute of Archaeology of the Academy of Sciences of the USSR was specially founded with the aim of investigating the antiquities of Margiana. Later, Ashkhabad archaeologists joined these excavations and discovered and studied the ancient sites of the western area of Margiana.

In the autumn of 1972, the Margiana Archaeological Expedition continued its prospecting excavations at Auchin Depe and Takhirbai-3. Many new settlements were found that comprised respectively the Auchin and Takhirbai oases of Margiana.

In 1974 the Gonur oasis was discovered and experimental excavations took place in the Gonur-I settlement. The Togolok oasis was also found at the same time. In the spring of 1977 the archaeological excavations concentrated on the Togolok oasis where over 30 ancient farming settlements were discovered, their surface yielding rich and diverse archaeological material. Unfortunately during the period of developing virgin lands in modern times a number of Margiana sites were partially or completely destroyed. In the autumn of 1978 the Margiana Archaeological Expedition limited its work to the settlements of Kelleli-4 and Adji-Kui 8.

In 1981-1983 permanent large-scale excavations of a fortress on the capital settlement of Gonur-I were launched. Parallel digs were also started in the Togolok oasis in spring of 1983. Thus, at Togolok-I a stratigraphical sounding was made while at Togolok-24 the excavations of a destroyed grave pit were finished. In the autumn of 1983 at Togolok-21 excavation probes were started and continued during 1984-1986. As a result of these works a monumental building of a temple type was excavated there.

In spring 1987 excavations of a small "rural temple" on the Togolok-I settlement were started and in 1988 were fully completed. This settlement was a capital for the whole Togolok irrigation oasis.

Excavations of south Gonur (temenos) started in autumn of 1988 and continued until the autumn of 1994.

For the first time in the history of the investigation of Central Asia, as a result of these large-scale works, three temples connected with the cult of hallucinogenic beverages and the fire cult were discovered.

As was mentioned above, the beginning of the second millennium B.C. witnessed a clearly marked decline and deterioration of the traditional farming oases of south Turkmenistan and the transfer of living centers from the piedmont zone of the Kopet Dagh to the basin of the ancient delta of the Murgab River. The development of the ancient delta of the Murgab River started from its north section. It was here where, during spring floods, water from the mountains enriched with fertile silt covered the whole plain, making it suitable for ancient farming. At the same period of time, the capital settlement of Gonur was probably founded in the area of the Murgab delta where the delta channels fanned out. Favorable conditions helped the first colonists to settle in this area. These were most likely the south Turkmenistan tribes that as early as the end of the third millennium B.C. migrated from the piedmont zone of the Kopet Dagh and started developing the Murgab delta basin. These could have been people from such large settlements as Namazga Depe and Altyn Depe. Very soon they started their economy and began to build houses, raise cereals and breed cattle. Soon after, new tribes migrated here from the territory of East Iran. Their previous homeland is supposed to be somewhere farther to the west, probably in north Mesopotamia and Asia Minor. The problem of the origin of these tribes will be discussed later but it should be noted here that these were tribes of farmers and stock-breeders that easily and quickly

assimilated with the local south Turkmenistan tribes. As a result of this assimilation a new center of the ancient farming culture in the system of the whole Near East originated.

The immigrants from the far West rather peacefully coexisted with the local tribes; but as far as the ideological part of their lives was concerned, we should say that they followed their own religious ideas and cult ceremonies, different from those of the local population. The south Turkmenistan tribes that migrated to the basin of the Murgab delta continued to worship the Mother Goddess, for numerous terracotta figurines of her image were found in abundance in the Margiana settlements. In their turn the immigrants from the far West were fireworshippers and cult beverage users (which is proved by their temples at Togolok-I, Togolok-21, the temenos and the Gonur fire temple) and avoided sculptural representations of their deities. It is probably not at all accidental that there is a complete lack of terracotta statuettes of female deities at some of the Margiana sites while at others, that were presumably founded by south Turkmenistan tribes, they are present in abundance.

As time went on, in Margiana in an area over 3000 sq. km, several irrigational oases such as Kelleli, Adji-Kui, Auchin, Gonur, Adam Basan, Taip, Togolok and Takhirbai were founded. There were about 200 ancient settlements located there but they belonged to different periods (Sarianidi, 1990, p. 758). As is well known, all the rivers of the Central Asian plain including the Murgab River, flowed in the western direction and it was there in the ancient delta of this river that Margiana was located. A gradual and centuries-old movement of the river and its delta caused the abandonment of some irrigational oases and the origin of others that correspond to a still later period.

It is believed that the best lands for development and farming were those located in the "tail" sections of the former delta of the river and it was here where the earliest, the Kelleli irrigation oasis, was formed. Later, due to the gradual movement of the delta fan in the southwest direction, the oasis was completely abandoned and its people moved farther on in search of a new oasis. As a result of this migration, the later settlements such as Togolok and Takhirbai are located to the south of the previous settlements. Still farther to the south, sites of Early Iron Age and of antiquity are located (Fig. 9).

Undoubtedly the capital of the ancient country of Margush was Gonur, the largest settlement, which consisted of two unequally sized mounds: a northern and southern ones. From the beginning the first colonists of the Murgab delta settled at northern Gonur with its general area of 20 hectares. The cultural layer of this monument measures up to 3.5 m. In the center of the settlement there was built a rectangular fortress or an acropolis that was separated from the houses of commoners by three large squares. Simultaneously along its outer eastern facade a monumental fire temple that possibly served the needs of the whole population was built. Near the northern mound quarters of potters and possibly their workshops as well, are found. Some time later, at a distance of about 200 m farther to the south a temenos or "a sacred sector" that comprised south Gonur was built.

Adji-Kui 8 was the central settlement of the Adji-Kui oasis. Archaeological reconnaissance resulted in the discovery of a complex that conditionally could be considered as a fortress or an acropolis that was encircled by walls on its outer facade. These fortification walls were 1 m thick, on the inside they had some sort of pilasters that possibly were built for strengthening the walls. The partially completed uncovering of the layout revealed a series of interconnected rooms. Among them one had wall niches (three in each wall) and in the middle of its western wall there is a recessed fireplace with a flue. This building was possibly a residence of a "provincial" ruler in the territory of the Adji-Kui oasis (Sarianidi, 1990, fig. 2).

The other large complex, Togolok-I, served as capital of this oasis. Togolok-I consisted of a central mound nearly 4 meters high and occupied an area of about 12 hectares. This is a large, flat-topped hill with a slight elevation on the south and an abundance of ceramic sherds scattered far around it. Rare sherds of painted wares more typical of the Early Iron Age of Margiana are found among the main pottery of the Late Bronze Age. To the southeast of this mound is a small hillock where one temple was fully excavated. To the east of the hill, potter's kilns are located making up special quarters for ceramics craftsmen. The trench in the center of the hill has revealed three building periods of 3.5 m deep with the material all relating to the Late Bronze and Early Iron Ages.

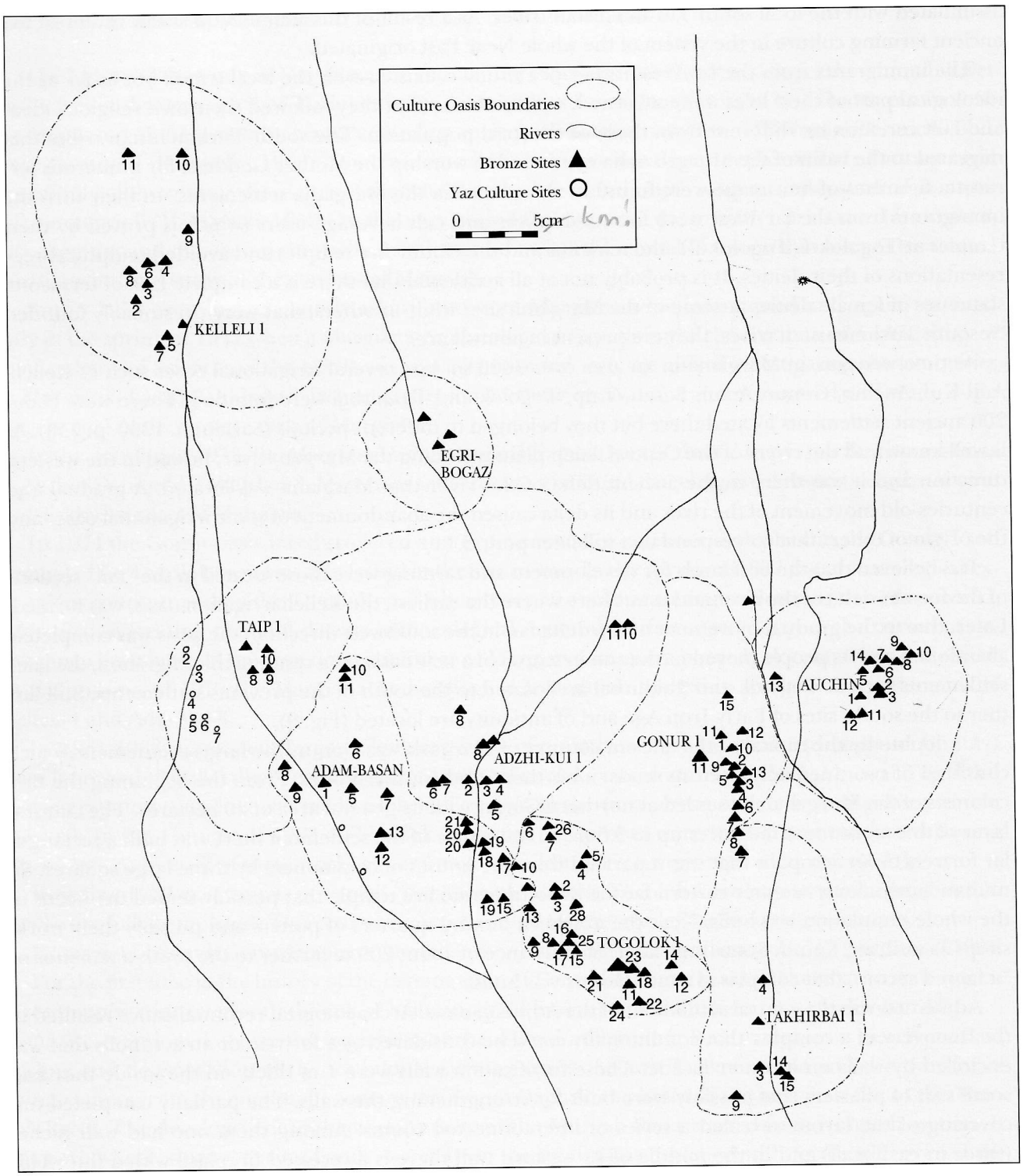


Fig. 9. Map of the Bronze Age sites of Margiana.

Finally, it should be noted that the first attempts in developing the ancient delta of the Murgab River were made at the end of the fourth millennium B.C. when the south Turkmenian tribes of the Geoksyr type appeared in this area. This is proved by singular deposits of ceramics on the north outskirts of the Kelleli oasis. Judging by the available data these attempts were unsuccessful and the newly arrived tribes left the Murgab delta, being unable to develop it. (Incidentally, a similar picture is observed in the lower reaches of the Zeravshan River when on the Sarazm settlement there appeared the same Geoksyr tribes that firmly settled down on the new land, remaining conservatively true to their old traditions in material culture and religious ideas. It is likely that the local ecological conditions were much

better here than in the Murgab delta and this helped immigrants to continue their life on the new site.)

Archaeological excavations continue to provide us with new material that shows that in the third millennium B.C. the center of life moved from the traditional farming oasis of south Turkmenistan to the ancient delta of the Murgab river. Here a new prosperous country flourished, which was mentioned in the Behistun inscriptions as the "country of Margush". According to the ancient tradition the Greek authors changed this name to "Margiana" and it is used here as a synonym of Margush .

Up until recently, archaeological works in Margiana have been limited to surveys and composition of archaeological maps. Wide-scale excavations were undertaken only in recent years. Although the ceramics assemblage is limited mostly to surface finds it is still possible to reconstruct rather fully the general representation of the material culture of Margiana from the end of the third millennium B.C. through the second millennium B.C.

In conclusion, we should discuss one problem of terminology. In the whole system of the Near East, only in Bactria the well-known materials from Margiana find their closest similarities. This fact gives us every reason to speak about the "Bactria-Margiana Archaeological Complex" (BMAC). This term can be applied to the direct archaeological data en toto, and is accepted by many scholars. Another name for this complex has been suggested: the "Civilization of Oxus", which seems to be less apt. Indeed, the word "civilization" suggests as a minimum requirement the existence of a writing system, which so far has not been found either in Bactria or in Margiana. Furthermore, Oxus is the ancient name of the Amu Darya River and if Bactria can be somehow related to the basin of the Amu Darya, Margiana definitely has nothing to do with this river. Besides, if future excavations find a similar archaeological complex in Baluchistan (where the BMAC material is so far slightly traced but we are on sound ground to expect it here), then this term ("Civilization of Oxus") in no way can be applied to that area. In other words, the term "Bactria-Margiana Archaeological Complex" (BMAC) most fully and correctly can be used for the given area and the material found there.

It should also be mentioned that the term "Outer Iran" that will often be used in this work refers to the territory located to the east of the big Iranian deserts Dashti Kevir and Dashti Lut and also to all the ancient farming oases of Central Asia, Afghanistan and Baluchistan.

Pottery Production and Ceramics

Ceramic kilns are found in almost all the settlements of ancient Margiana but only in such large, "capital" ones as Gonur-I or Togolok-I are they located in compact groups making up a sort of "potters' quarters". Most of these kilns are rectangular, their sizes differ considerably, the largest of them being 3 m long and 1.5 m wide. They all look like a pit dug in the earth and lined with bricks covered with a thick layer of clay. The kiln consists of two parts: the lower, a furnace, and the upper, a firing chamber with its floor supported by centrally located pillars or a wall. Sometimes the firing chamber has a brick-made half-spherical shape and on one of its sides is a mouth through which half-made products (that is, sun-dried clay pottery) were placed inside the firing chamber. After this, the mouth was capped by a layer of brick that was later disassembled for taking the fired pottery out of the furnace.

The earliest kilns in Margiana had supporting pillars (for holding the floors of the firing chambers) located in the center of the furnace. But in the later sites, such as the ones in the Togolok oasis, one can see that ancient pottery-makers have built false-vaulted ceilings of furnaces that served as floors of firing chambers as well. The floors had holes through which the hot air from the furnace went into the firing chamber filled with pottery to be heated. Thus, it is clear that Margiana ceramic furnaces belonged to the type of two-chambered kilns, which marks a step forward in pottery production (Sarianidi, 1990, p. 40-43).

The ceramic assemblage from Margiana of the Late Bronze Age is mainly represented by wheel-thrown pottery fired in special two-chambered kilns. The clay is well levigated and has no other inclusions except for a small amount of sand. The color of potsherds varies from reddish to pink and the slip is

light-green and light-pink. As a rule, the pottery is plain and only in rare cases is decorated just below the rims of vessels with ornamentation of incised wavy lines or hatched triangles (Fig. 13, No 7). It should be especially mentioned that rarely found images are always of the same type and portray a tree and a pair of goats in front of it (Fig. 10, Nos 4-6). The origin of this motif is clearly Syro-Anatolian, this being additionally confirmed by some Margiana vessels decorated with images of goats standing on their back legs. It should also be noted that these designs were made in the technique characteristic of the decoration of Anatolian pottery. In the fire temple of north Gonur was found a miniature vessel with an incised image of a bird standing by a "tree". One of the ritual vessels portrayed a pair of goats standing at both sides of the central tree, on branches of which two birds are seated (Fig.10, No 4).

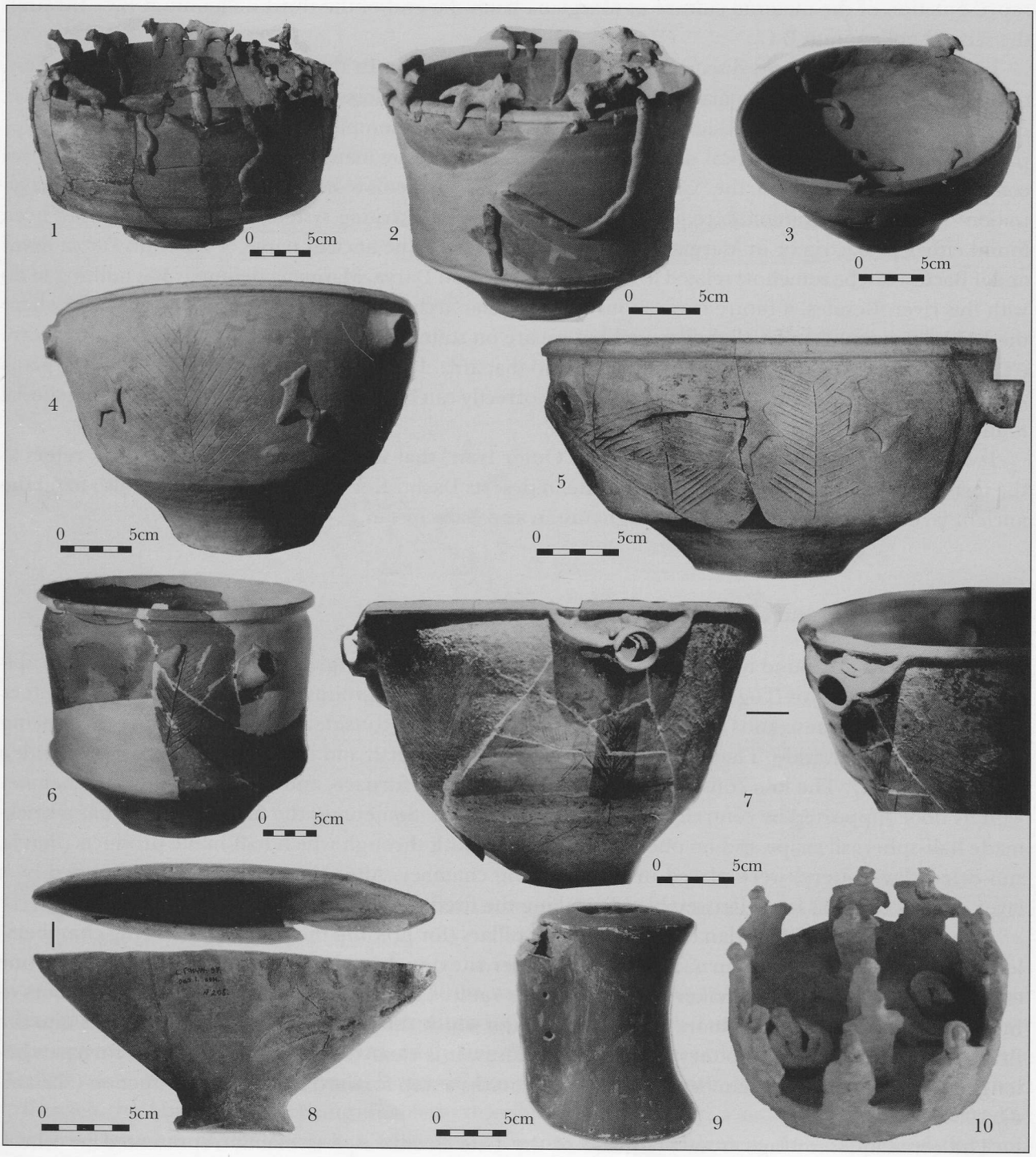


Fig. 10. Margiana. Ritual vessels: Togolok-1 (1, 2), Togolok-21 (3). Gonur cemetery (4-7)- courtesy of Ligabue Institute. North Gonur palace (8, 9). Sculptured dish (10)- courtesy of Ligabue Institute.

There are isolated cases of designs in the form of ringed lines placed under the rim, signifying that the traditions of the painted pottery in south Turkmenistan were gradually dying out. Nevertheless, one should mention that in the temple of Togolok-21 and in the fortress of north Gonur two painted vessels that presumably were imported from Baluchistan or the Indian Subcontinent were found (Fig. 11, No 7). The mid-sized vessels with their upper halves painted dark-red possibly reflect Harappan influence. The handles are almost absent and only in rare cases are there loops intended for hanging these vessels rather than for holding them.

Ceramic forms are rather variable, the most common of them including vases and goblets on high feet. Widely represented are conical and half-spherical bowls, cups, pots and plates. Kitchen ware is handmade, the clay is richly tempered with small quartz pieces and ceramic crushed sherds. Its main

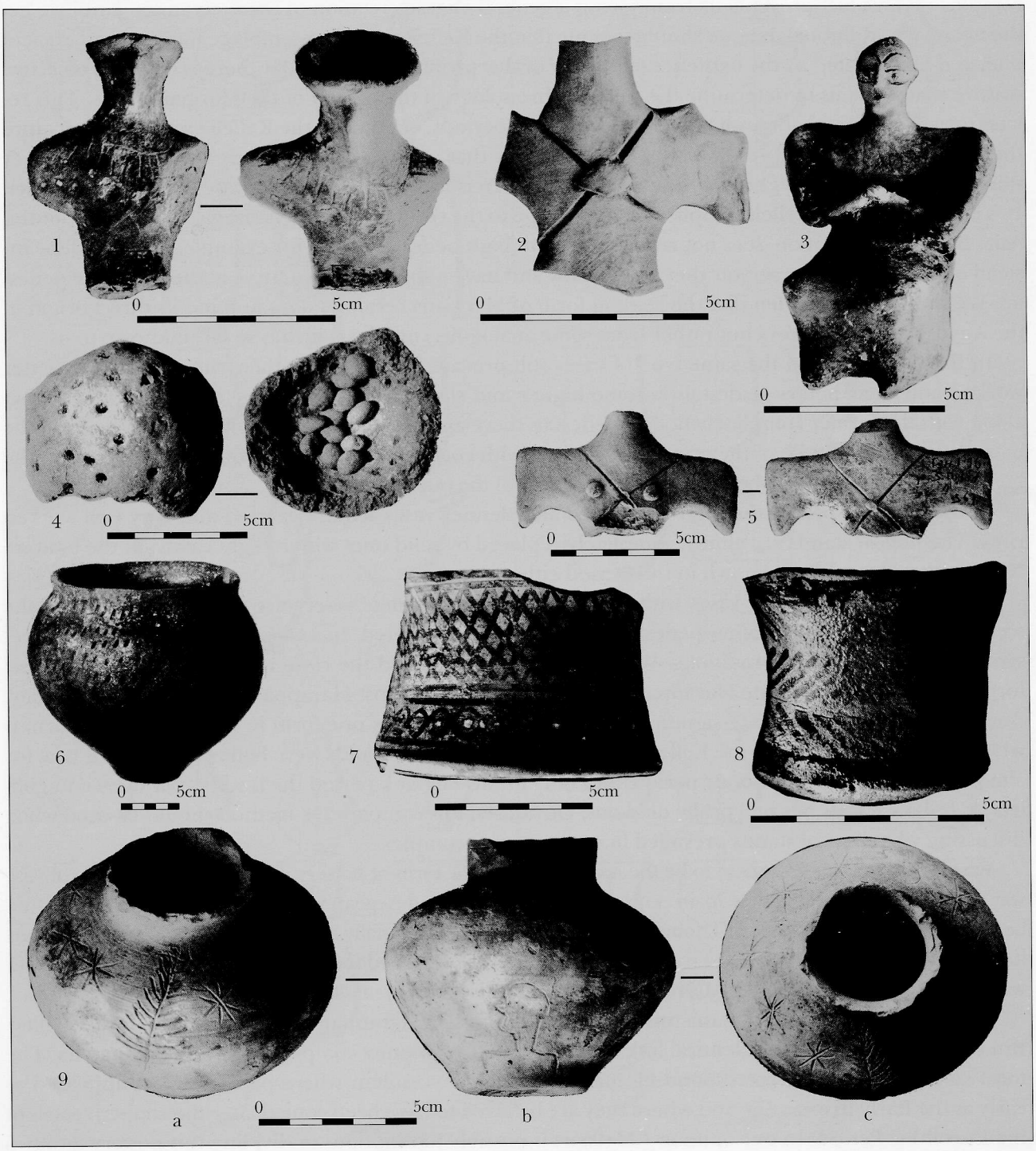


Fig. 11. Margiana. Pottery and ceramic objects: north Gonur palace (1-5, 7-9), south Gonur temenos (6), cemetery of north Gonur (8).

forms are represented by kettles, frying pans and tea pots. A small group consists of gray and red clay pottery that is often burnished. A special group of artifacts is represented by handmade ware. The clay of this pottery is tempered with grog of reddish and quartz color and sometimes has "spots" of the same shade. The most common forms are the following: big bowls, open cups with sloped bottoms and high flask-shaped vessels with rims slightly turned outwards. Finally, another special group is represented by a few examples of pottery (including a painted one) that relates to the complex of the Early Iron Age.

Margiana ceramics are nearly the most conservative part of its material culture. Unfortunately, with the exception of ceramics from the cemetery of Togolok-24 and the tombs of Togolok-21 that were built into the destroyed walls, there is no other large representative collection of ceramics from the closed complexes. This fact prevents us from giving a general characterization of these ceramics. Until we get the necessary additional data we should assume that the Kelleli ceramic assemblage was the most ancient one, as demonstrated by the existence of pottery of sharp-ribbed forms. So far there is only one objective feature that helps us to determine the relative chronology of the history of the Margiana oasis. This relates to vases on feet that are characteristic for all the periods, but only in the Kelleli oasis do they acquire the form of deep conical reservoirs with simple rims that are sometimes slightly bent outwards. They stand on short and always hollow funnel-shaped feet. In isolated cases there are vases on corrugated feet. It is believed that the Kelleli complex is close in type to the ceramics of the Namazga V period of Central Asia. But this assumption does not refer to vases on high pedestals since, for example, in Altyn Depe instead of having a deep reservoir they are shallow and have a sharp concave curve at the top of the pedestal. We should assume then that the leading form of Margiana ceramics does not find its direct origin in the Altyn-Namazga pottery but rather from some analogous complex which is so far unknown to us.

In the Gonur period the same type of vases still prevails but gradually their rims seem to be better worked and their hollow pedestals become higher and slenderer. It should be especially noticed that along with the former completely hollow pedestals there appeared some that were half-hollow, from the bottom up to the middle of the stand. Fewer vases with corrugated stands are found and in general the goffering is not as deep as before, they seem to sort of die out (Fig. 12).

In the Togolok period the high-pedestaled and slender vases acquire everted and very well worked rims. The hollow stands are almost completely replaced by solid ones with a slight cavity on the bottom. No corrugated stands are known in this period either.

In the Takhirbai period vases with disproportionately shallow reservoirs suddenly appear on the scene, they stand on high hollow pedestals that are often corrugated. In a way, one is reminded of the revival of previous ceramic traditions. We have already mentioned the close resemblance of these vessel forms to those from the Late Harappa period or may be to the Post Harappa vases of the Indus Valley. But this fact is not of absolute significance because the number of one form in ratio to another form is what matters most. Thus, in the Kelleli period practically all vase stands were hollow, the same is true for almost all the vases of the Gonur period, and only in the Togolok period the tradition of vases and goblets on hollow stands has practically died out. Obviously, this comparative method should be used when discussing what type of stands prevailed in each separate complex.

Vases on high pedestals seem to be the most characteristic form of pottery in Margiana. This type of vase was rather widespread in all the main centers of the Near East and Aegean world and for this reason it should be studied with more attention. Though these vases were conventionally named "fruit vases", still J. Mellaart has already mentioned that at least some of them could have been used for drinking water or wine mixed with water. In some tombs of the BMAC, remains of food, that is bones of small cattle, were found in these vases.

The pedestal vases of Margiana find their analogies in the Harappan civilization of the Indus Valley. But their direct, sometimes identical links are found in the ceramics complex of southwest Anatolia. The most convincing are the corresponding materials from Beycesultan where pedestal vases appeared as early as the Early Bronze Age and where they are believed to have been copied after the copper vessels of the Eneolithic Period. In our opinion J.Mellaart is possibly too cautious in dividing this pottery into two groups: the killiks and the fruit vases. In some cases small killiks (Lloyd and Mellaart, 1955, fig. 6, No 2, 4) differ from fruit vases only in size (Lloyd and Mellaart, 1955, fig. 7, No 9).

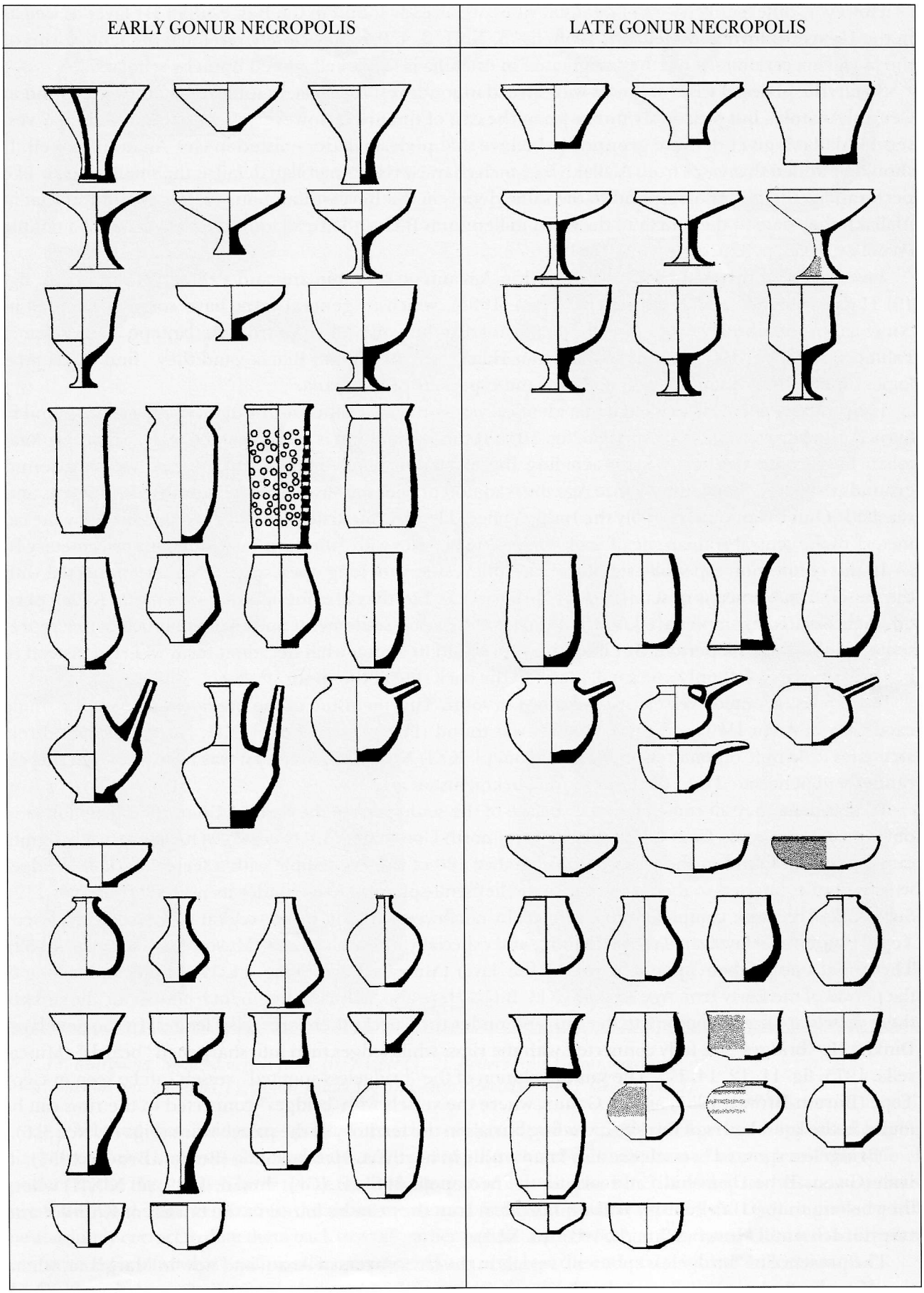


Fig. 12. Burial pottery of the Early and Late Gonur.

However, different versions of pedestal vases are already found in the Beycesultan III layer as well as in the II layer (Lloyd and Mellaart, 1956, fig. 5, No 1, 2, 4, 9). They closely resemble the same forms of the Margiana ceramics. That they originated in Anatolia is fairly well agreed upon by scholars.

So far, the pedestal vases are most widespread in southwest Anatolia, to some extent they are found in Central Anatolia, but practically unknown to the east of this area. However, the discovery of similar vessels in Alallakh gives definite grounds to believe that pedestal vases existed in east Anatolia as well. It should be added that vases from Alallakh had such characteristic Anatolian detail as the small window-like perforations that fully correspond to the same details in the Beycesultan pottery. It is significant that in Alallakh they date to the fourth to the third millennium B.C. and are all found in the region of a temple (Woolley, 1955, p. 329, table. CIX, No 13).

Vases on high pedestals were discovered in Arslantepe (Frangipiana and Palmieri, 1983, p. 55; fig. 19) Hassek Hoyuk and Degirmetepe (Eisin, 1994), which in general form have correspondences in Nineveh, in the fifth layer. Especially significant are the goffered vases from Arslantepe (Frangipiana, Palmieri, 1983, fig. 19, No. 6) as well as from Hassek Hoyuk (Behm-Blance),and they find direct analogies on the vases of south Turkmenistan and especially of Margiana.

It is probably not at all accidental that identical vases on stands with cut-through "windows" are found in Syria in the Mari temple (Parrot, 1956, fig. 105). If this assumption is correct than it is clear that this Anatolian form could not reach Syria avoiding the eastern area of Anatolia. In any case we have sound grounds to believe that in the Bronze Age the tradition of pedestal vases from here diffused eastwards and reached "Outer Iran" and possibly the Indus Valley. The intermediate point on this way is fixed by the cemetery of the central Iranian site of Sialk where similar vases with "windows" are found in the cemetery B.

In this connection especially significant are the vessels with long open spouts that are connected with the vessel's rim by means of semi-circular "bridges". So far, they are not found at sites of the Kelleli period, their isolated examples are known in the Gonur period settlements and they are much better represented in the Togolok period. But here they are found in a somewhat decadent form wherein instead of a "bridge" there is left only one small piece on the back side of the spout.

"Bridgeless spouted" vessels are unknown in south Turkmenistan of the previous age with the single exception of Anau III layer where a vessel was found (Pumpelly, 1908, pl. XII, No 1) that had direct analogies in Iran (Contenau, Ghirshman, 1935, pl. XXI, No 2). Apparently it was from Iran that this ceramic form penetrated into the local south Turkmenistan area.

In Margiana they all come from the surface of the settlement of the oasis of Gonur and Togolok and only two of them come from the cultural layer of north Gonur (Fig. 13, Nos 5-6). What is especially significant is the sink found in the ruins of the chamber 100 of the fire temple with a feebly marked "bridge" which is not connected to the rim and with a relief semi-spherical ledge under its neck (Fig. 13, Nos 1, 2). Such sinks are more completely represented in northwestern Iran in the region of Lake Urmia (Geoy Tepe, Haji Firus, Havtavan Tepe, Hasanlu), and especially in Dinkha Tepe (Muscarella, 1975, pp. 49-52). The earlier ones of them appear in the Dinkha layer (Muscarella, 1975, fig. 11, 12, 14, 17) and belong to the period of the Early Iron Age of Iran (XIV B.C.). Here also, as on the fragment from Gonur,the sinks of these vessels are not connected to the rim, and under their necks there are relief ledges. In the next layer Dinkha II, "bridges" are fully connected with the rims, while ledges turn into sharpened "beards" (Muscarella, 1975, fig. 11, 12, 14, 17). The same evolution of the "bridgeless spouted" vessels can be seen in Geoy Tepe (Burton-Brown, 1951) and in Gonur, where the vessels with 'bridges" connected to the rims can be found in the latest layers of this site including burials in the territory of the palace ruins (Fig. 13, Nos 5, 6).

"Bridgeless spouted" vessels are also known only in northern Mesopotamia (Burton-Brown, 1951), in Iran (Giyan, Tepe Djemshidi) and also in the necropolis of Sialk (Ghirshman, 1939, pl. X-XII) where they belong to the 10th century B.C. In northern Iran they can be found in the burials of Khurvin and Gheytardeh untill Hissar (Schmidt, 1937, pl. XLI).

The presence of "bridgeless spouted" vessels in the latest layers of Anau, and now in Margiana, where they give the evolutionary line of development, indicates that this typical ceramic form appeared simultaneously with the coming of tribes from the west who continued making their traditional vessels here.

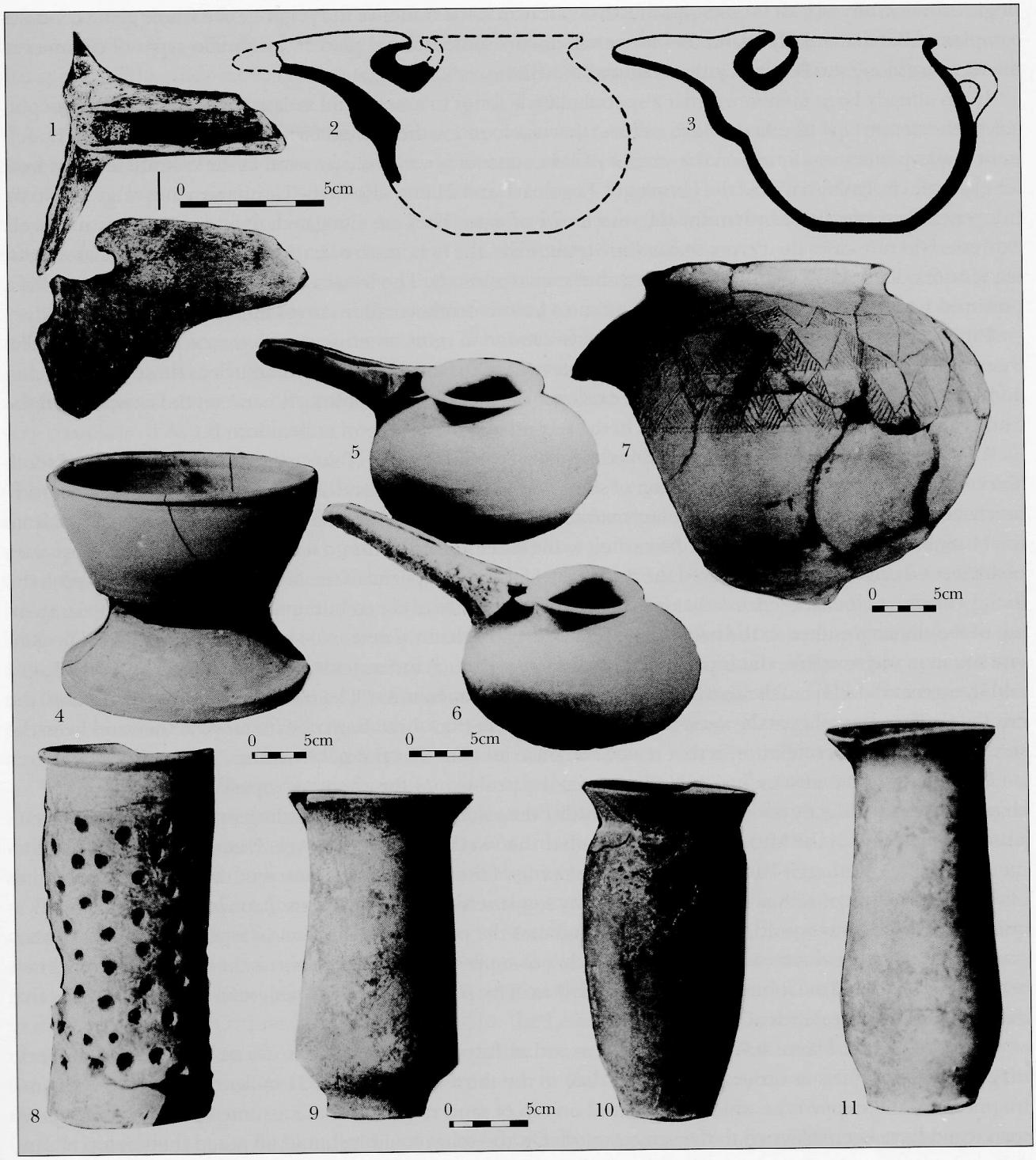


Fig. 13. Margiana. Spouted vessels from fire temple (1, 2). Pottery from Gonur temenos (4-strainer on ceramic stand;7), Gonur palace (5, 6), Gonur cemetery (8-11); Geoy Tepe (3).

It is believed that "bridgeless spouted" vessels were not found in Early Iron Age I and appeared only in Early Iron Age II of Iran (Medvedskaya, 978, p. 555). But the already mentioned examples of this type of pottery in the Hissar III C layer speak for the long time of its existence which is rooted in the second millennium B.C. And if one remembers the above-mentioned finds in Giyan and especially in Djemshidi then it will be absolutely correct to date them back to a still earlier period. Early Iron Age II is dated to the tenth to eighth centuries B.C., a fact that confirms the existence of such vessels at the end of the second millennium B.C.

On the whole, the ceramics complex of Margiana finds the most complete and direct analogies in Bactria and then in east Iran. Similar and rather clearly expressed ceramic forms are found in Shahdad and also in

single cases in Yahya IV. It is quite possible that east Iran is the center of the origin of the whole given ceramics complex of Bactria and Margiana. Below we will discuss some isolated places with similar types of ceramics in the territory along the Persian Gulf and up to Baluchistan.

It has already been mentioned that a special place belongs to a small and isolated group of handmade pottery of the steppe type (the Andronovo culture) that was found in the ancient farming sites of Margiana. Though most of this pottery was found on the surface of sites, some of it was also excavated in the cultural levels as well, for example on Takhirbai-3, in the temples of Togolok-1 and 21 and also in the Gonur temenos (Fig. 11, No 6). It is generally represented by handmade vessels of a jar type. They are elongated, their everted rims are barely expressed (in rare cases their cross-sections are triangular), the bottoms are flat. As a rule, the clay is dark, almost black, with a lot of grog inclusions (crushed shells, quartz, sand). The incised decoration is mainly designs of a pine tree, isoceles triangulars, nets and in rare cases a tooth ornamentation covers the whole of a vessel's body.

Different amounts of this steppe type pottery are found in some other oases with the exception of the Kelleli oasis. The discovery of sites with this type of pottery near the farming settlements such as those in the Auchin and Gonur oases most likely speaks for the existence of the rather wide contacts between the farming and the cattle-breeding tribes of the Murgab basin in the second half of the second millennium B.C.

Also for consideration is an old theory according to which the crisis of the ancient farming culture of south Turkmenistan is explained by an invasion of some war-like nomads from the north that burnt down the traditional farming centers. Lately this seemingly attractive theory was reconsidered in the light of new material from the Murgab basin (Kuzmina, Lapin). According to the latter interpretation, a large drought in the third quarter of the second millennium B.C. caused the drying up of the ancient delta of the Murgab River and as a result the disappearance of the oases. But soon after, in the fourth quarter of the second millennium B.C. some dampening of the climate resulted in the habitation of the Murgab delta by a new cattle-breeding population. The general situation was unstable; this is proved by the existence of such fortresses as Auchin, Gonur, Togolok, Taip I and by a general decline of the farming tribes of ancient Turkmenistan. "The ecological changes that caused the crisis of the farming tribes at the same time helped the north stock-breeding tribes to move to the oases from the steppe and semi-desert territories that have been once inhabited by them" (Kuzmina, Lapin, 1984, p. 19).

In the light of the new archaeological material the problem of this theory is especially clear. Thus, the archaeological data directly and completely contradict the statement that mass settling in the Murgab delta took place in the period of the Middle Bronze Age rather than in the Late Bronze Age. Even more false is the statement that in the Namazga VI period "...the developing of the delta sharply contracts, the many dozens of sites of the developed Bronze Age are now replaced by single settlements of the Late Bronze". But in reality it was quite the opposite way round, the Late Bronze Age was the period of the utmost prosperity in the life of Margiana. Moreover, the direct archaeological facts do not support the statement about the insignificant thickness of cultural layers, as if at Gonur they reached only 1 m. This statement is made with reference to the article that does not mention the depth of this site.

In fact the cultural layer at Gonur is up to 3 m and at Taip 1 it measures up to 2.5 m. The two authors seem to ignore the real facts in order to be able to date to the third quarter of the II millennium B.C. the ceramic fragments of the steppe type which were found on top of sand ridges. And the assumed severe drought in its turn could have been assigned to the same period. On the other hand it should be noted that on top of sand ridges there were also found small fragments and occasionally whole fields of ceramic sherds from farming sites. They got there as a result of sand and rain storms that are very strong in this area. Sometimes the winds are so mighty that not only ceramic fragments but camp tents could be moved from one place to another.

Beyond any criticism is the assumption that the construction of fortresses in Margiana began for the protection from danger on the part of the steppe tribes. Fortresses of the Kelleli oasis absolutely contradict this statement, since they had been built long before the first steppe tribes appeared here. Also at Togolok-21 the surrounding walls were built due to the special sacred purpose of the whole monument. In order to prove their statement about the global significance of the assumed intervention of steppe tribes the authors refer to the "traces of fire on the Tekkem Depe". These were the results of the experimental excavations made 30 years ago that were later refuted by the excavations led for many years at Tekkem Depe. These excavations revealed this kind of pottery at a depth of 0.8 m from the surface (Schetenko, 1972).

Also contrary to the archaeological situation is the statement that the pottery of steppe character was "numerous" on the sites of the Late Bronze Age in south Turkmenistan and Margiana (Kuzmina). Suffice it to say that species of the Andronovo type pottery do not exceed 100 fragments among many dozens of ceramic pieces of Margiana. The same is also true for the sites of south Turkmenistan.

We would not focus on the details of this erroneous interpretation of the evidence if it was not used for reaching some crucial conclusions about "the destruction of the culture of farmers as a result of steppe tribes intervention from the north". Though this statement is in no way supported by the archaeological material, still the conclusion is reached that only the Andronovo tribes can claim the role of ancient Indo-Iranians, or, in other words, of Aryans (Kuzmina), a claim that sounds rather doubtful.

Many authors support the idea that the steppe tribes were historical Indo-Iranians. In this aspect the above-mentioned theory has significance and the study of mutual contacts between the tribes with different historical and cultural origins acquires profound meaning. The thesis which states that the decline of farming life in Margiana was connected with the natural drought and the later intervention of the steppe tribes involves a more careful analysis of the archaeological material and its historical interpretation since it affects the solving of the very complicated Aryan problem.

Natural factors undoubtedly played a great role in the life of the Margiana farming tribes and later we shall discuss this problem in more detail. It is also unquestionable that the general contraction of life in this area was connected with the natural migration of the Murgab river. It is clearly witnessed by the fact that the ancient sites were located in the north of the country (Kelleli period) and then gradually moved to the southwest where there appeared first the settlements of the Gonur period, later of the Togolok period and finally of the Takhirbai period. The dynamic changes of the bed of the Murgab river affected the development of the irrigated lands. Natural migration of rivers inevitably caused the migration of cultivated lands and as a consequence the movement of the center of life in the general southern direction. As for the pottery of the steppe type, we can say that, although in small amounts, it is found at the sites of the Gonur, Togolok and Takhirbai oases in the course of hundreds of years. This circumstance proves the peaceful coexistence of neighbouring tribes with different types of economy in the period from the second millennium up to the first millennium B.C. (Itina).

And now we would like to discuss some of the individual ceramic pieces. On the surface of some settlements there were found fragments of ceramic zoomorphic vessels mainly in the camel shape. One such red slipped well burnished vessel was excavated in the fortress of north Gonur. It was made in the form of a camel with a characteristic barrel-like body and a high neck between the two humps of the camel (Fig. 14, No 1).

Though this type of small zoomorphic vessels was known in Hissar (Schmidt, 1937, pl. XLVI), throughout the whole Near East they were most popular in Anatolia (Kul Tepe, Alisar, Bogazkoy, Alachahoyuk and some others) where they were made in the form of a bull. And now a very similar one was found in Margiana. In Anatolia they were known in the beginning of the second millennium B.C. and from here they penetrated to the Aegean world (Orthmann, 1975, fig. 471), to the Levant (Animals in Ancient Art, 1996, No 256) and up to Margiana. We can assume that the culture of the zoomorphic pottery was introduced to Margiana by the newcomer tribes that started to make these vessels in the form of camels, since these animals were the most popular local species.

The excavations of the fire temple in Gonur and especially of its cemetery have yielded some mid-sized vessels with four spouts in the shape of horned bull heads (Fig. 10, Nos 6-7). Such vessels decorated with four bull heads along the rim, and occasionally on the outside of the vessel, were spread throughout Central Anatolia (Alachahoyuk, Bogazkoy, Mazathoyuk, Inandik Tepe, Eskiyapar) and are defined as cups used for ritual libation (T. Ozguch, 1988, fig. 64; R. Boehmer, 1983; ab. 37). Based on this, one can conclude that Margiana vessels with zoomorphic spouts had an Anatolian origin although a little changed under the local influence.

In the Margiana temples there were found some odviously cult vessels with sculptured friezes along the rim that earlier were unknown not only in the Central Asia but in the most part of the Near East. The decoration of vessels by sculptured figurines was characteristic for the Syro-Anatolian region (Chagar Bazar, Kul Tele and other) and the Aegean world, Cyprus in particular. There too, like in Margiana, one can find statuettes of a baby hugged by an adult. Rather representative are Cyprian vessels in the shape of a dish with a low rim decorated with modelled figurines. Analogous item from the collection of the

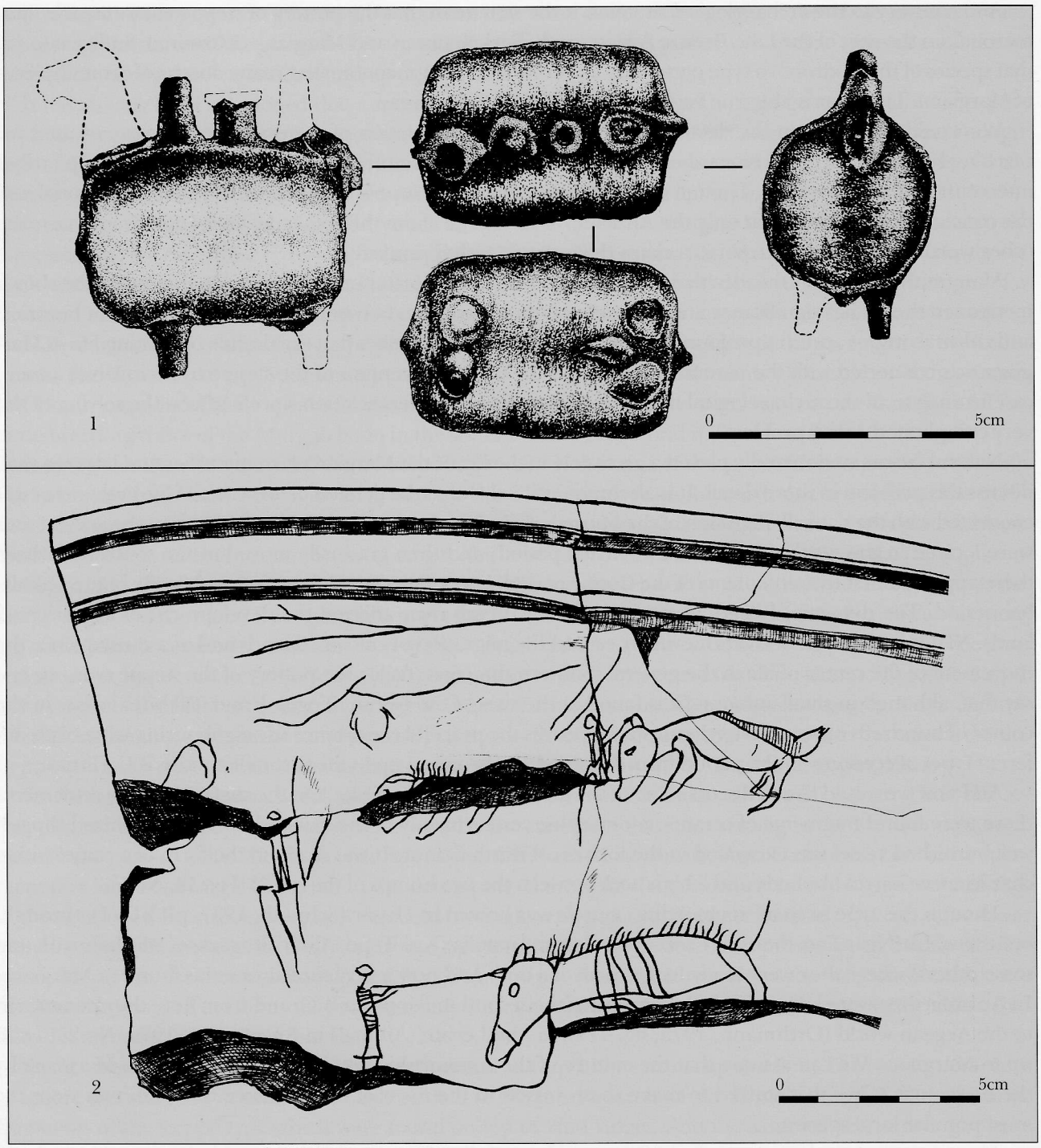


Fig. 14. Gonur. Palace of north Gonur: vessel in the shape of a camel (1). South Gonur temenos:graffiti (2).

Ligabue Institute comes from the illegal excavations in Shahdad (Fig. 10, No 10). On the "Ligabue dish" besides human figures there are separately modelled two coiling snakes on the bottom of the dish. This detail foreign to the Aegean dishes and vessels of this kind is on the contrary very popular in the art of Shahdad. The importance of the "Ligabue dish" can scarely be exaggerated since this item found in the territory of Eastern Iran undoubtebly proves the real historical link of the tribes that immigrated from the west with the Mycenaean-Minoan world.

There are isolated finds of some unstable goblets of conical form that could be only held rather than set on a surface, a fact that confirms their purpose as a drinking vessel. Similar goblets are found in Anatolia (Bogazkoy, Kanesh, Ikis Tepe) (Alkim, 1988, p. 164, pl. I, N 721).

On one vessel from the Gonur temenos there was preserved a hunting scene (Fig. 14, No 2) that was

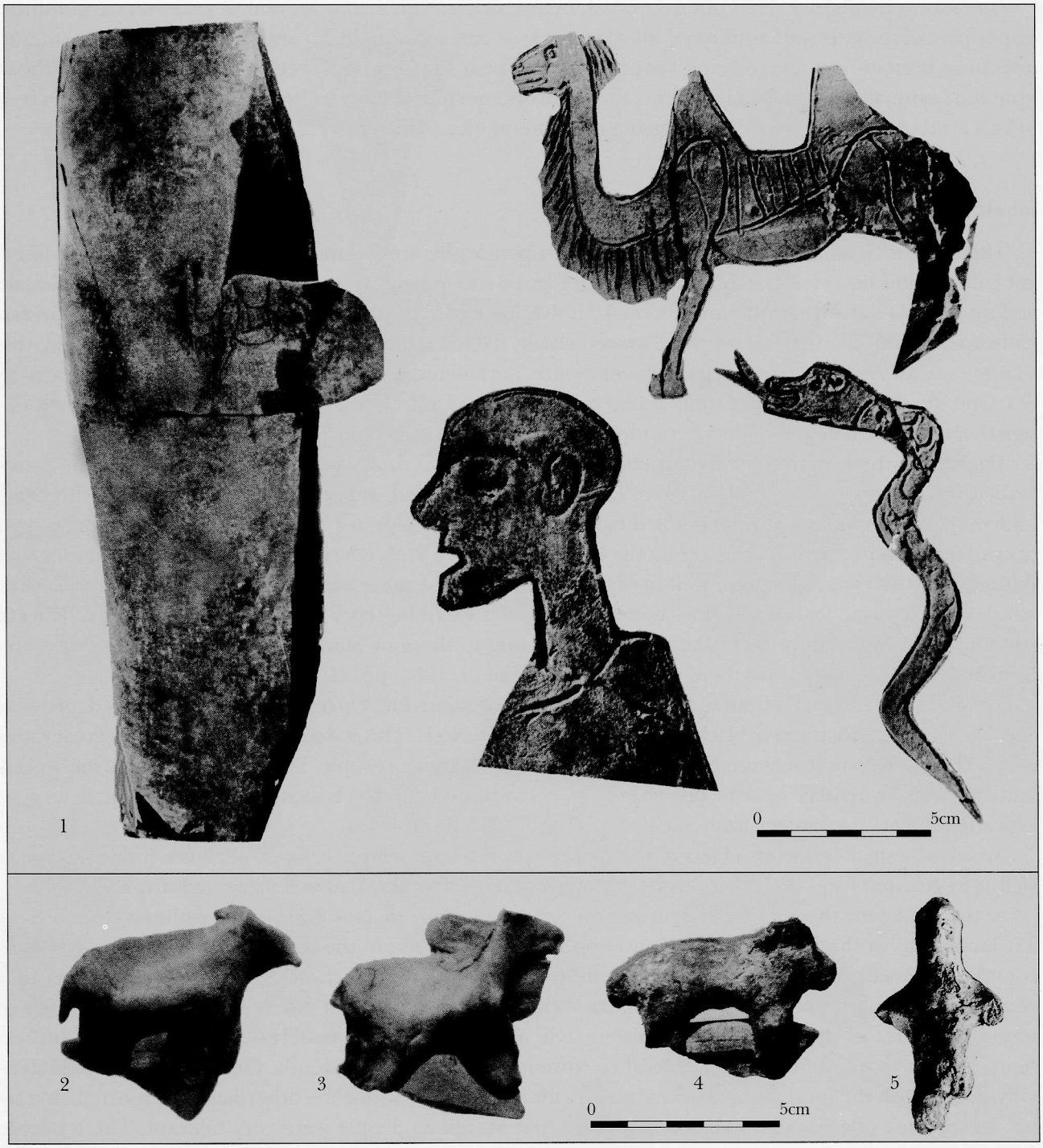


Fig. 15. North Gonur. Palace: scratched images on a drain-pipe (1). Terracotta figurines of Gonur cult vessels (2-5).

scratched on the surface prior to firing (Sarianidi, 1992, p. 17). The fortress of north Gonur yielded a ceramic drainage pipe with a skillfully scratched design of a two-humped camel, a coiling snake and a human bust (Fig. 15 No 1). Rather representative are some rare cylindrical vessels (often red-burnished) that were decorated with a perforated "pocket" (Fig. 10, No 9) on one side (Sarianidi, 1990, table. XIV) and that find direct analogies in Bactria (Potier, 1984, tabl. XLV, No 329). To a certain degree similar "pockets" are found now in west Anatolia, a fact that argues a possible link between these two areas (Turan, 1994, fig. 3, No 10). One such vessel is 30 cm high with the bottom 14.5 cm in diametre that might be evidence of its everyday destination. There is only one example of vessels of a "napkin glass" type with not a wide but narrow body (Fig. 10, No 8), formal analogies to which are known in Iran (Sialk) and Minor Asia (Troy).

One has to mention a small pot decorated, before firing, with a composition of nine stars around the upper part of its body and additional imagies of a tree and supposedly an anthtropomorphical statuette, one more human bust image being represented just near the bottom. It seems to be possible that those nine stars symbolize the pregnancy time, the anthropomorphical deity is the deity of fertility and the tree to be a symbol of "Tree of Life", expressing the general idea of fertility (Fig. 11, No 9).

Small Terracotta Plastics

This category is mainly represented by the anthropomorphic and zoomorphic figurines that reflect different cultural and historical traditions in the origin and development of this cultural trend. Thus, the female and rarely male statuettes of the conventional flat style are undoubtedly attributed to the south Turkmenistan anthropomorphic plastics. Among these conventionally flat statuettes we can single out one head in relief with a large nose and eyes. It clearly reflects the old south Turkmenistan traditions of the anthropomorphic plastics. One should note the rather complicated hairdo (or head attire) that was decorated with a scratched design that to a certain degree recalls the sculpture from Mari (Parrot, 1959, pl. VI).

There are three-dimentional statuettes which reproduce analogous so-called "composition" ones made of stone (see below). One of them, not fired but sun-dried, represents a seated matron with arms folded on the breast and a fine-modelled face. With the black color are indicated her splendid dress type of crinoline and probably a little cap on the head (Fig. 11, No 3). We have found some more fragments of statuettes of this type, which are well-fired but were modelled more rough and schematic. On the other hand, such stylistic features as fine-modelled face with extra big eyes under curved eyebrows, delicate aquiline nose and plump lips make this statuette close to those of Mari and especially the goddess Ur-Nanshe, so there is no any doubt in their similarity (Parrot, 1967, pl. XLV-XLVI).

Among those "unusual" ones a sun-dried female statuette stands out. On top of her head there is a depression like a shallow cup with traces of black soot inside of it (Fig. 11, No 1). This statuette is an evidence of a great variety of anthropomorphical ones used in the cult practice of the Margiana people. The terracotta head of the broken statuette probably reflects the same distant influence. The beard on its face is incised in a way that recalls an analogical treatment on a statuette from Selenkahiye (Loon, 1977, fig. 5).

Among the small terracotta objects one should single out fragments of ceramic phalluses (up to 10 cm), as well as fragments of legs of the handmade statuettes and one foot that had well preserved strips of sandals.

At the same time the sculptural figurines on cult vessels (Fig. 15, Nos 2-5) being absolutely unknown in Turkmenistan in the previous periods are found in Bactria, where the anthropomorphic statuettes are completely absent. Here one can witness a fundamental difference between Margiana and Bactria that concerns the sphere of ritual ceremonies. In Margiana, rather often, at one and the same site there are found statuettes of the south Turkmenistan style alongside the cult vessels decorated with sculptured figures, a fact that testifies to the peaceful coexistence of two different trends. One of them is fundamentally linked with the local south Turkmenistan cult ceremonies, whilst the other has an imported character. In this case one has every reason to believe that Margiana people were very tolerant. These people who came from the Kopet Dagh foothills and formed Margiana continued to follow their own cult traditions while the newcomer tribes practiced cult ceremonies of their far-away homeland.

It has been shown that south Turkmenistan anthropomorphic statuettes were not at all baby's toys. Moreover, they were used as indispensable cult attributes during ceremonial rituals related to farming activities. The concrete purpose of cult vessels is not quite clear, though it seems most likely that generally they were used for cult libations.

The zoomorphic plastics that existed alongside the anthropomorphical ones represent different species of animals, birds and in some rare cases fish. It should be also mentioned that though anthropomorphic statues were rather widespread on many Margiana sites, none of such statuettes has ever been found at any site of the Auchin or Takhirbai oases in spite of stringent efforts. So far there is no answer to this situation. Typical south Turkmenistan female statuettes (including some unbroken ones) were found during the excavations of the north Gonur citadel (Fig. 16, Nos. 1-4) as well as in some tombs of the ditch cemetery of Gonur (Fig. 16, No 5).

Fig. 16. Margiana. Small terracotta statuettes from Gonur palace (1-4, 6), Gonur cemetery (5), Altyn Tepe upper stratum (7), from the surface level of north Gonur (8-10).

Stone Objects

Soft steatite was often used for making large biconical whorls or beads (Fig. 17, Nos. 15, 16) that were frequently decorated with a circular design. Though being absolutely unknown in the previous periods this specific form of beads was introduced practically simultaneously in northeast Iran (Hissar IIIC), Bactria, Margiana, in South Afghanistan, Mundigak as well as in the Indus Valley (Jhukar culture). The large amount of beads with a circular design, and mainly their half-finished products, found in Margiana and Bactria testifies to the fact that they were not imported but made locally under the influence of the newcomers, who had been manufacturing them for a long time. It has already been mentioned that such steatite biconical objects with a circular design may serve as a very good chronological horizon since being unknown in the "ancient" series they are very well presented in Bactria in the "new" series. The most complete analogies are represented by steatite spindle whorls from Bactria and northeast Iran (Hissar) that were unknown here in the previous period. We should point out that ornamentation of a circular design around a centrally located point was a popular design in Hittite art where they decorated many bone and stone objects. For our subject the half-spherical forms (rarely of conical shape) of steatite spindle whorls are especially representative. They were decorated with similar circular ornamentation, most often with three or four designs on each object. Judging by the finds from the Alishar settlement they are not found in the Eneolithic or Early Bronze periods. But they appeared in Late Hittite times, a fact that indicates their "imported" origin (Breasted and Allen, 1932, pl. 58, No 267; Osten, 1937, fig. 484; Erzen, 1979, p. 156, No 13). This statement is substantiated by conical stone spindle whorls with a circular design from Gawra (Tobler, 1950, pl. CXXIX, No 48) and by the gold ones from Troy and moreover in the new Assyrian period they had a biconical shape as in those from Margiana (Summers, 1993, fig. 63).

If one remembers the forms and the incised designs on the steatite vessels from Margiana then it will be clear that they find their closest parallels in Tepe Yahya which is rightly considered one of the few international centers of mining and manufacturing of steatite. Among the many hundreds of steatite objects (their total amount exceeds 1000 samples) one can single out some artifacts with incised ornamentation that fully correspond to those from Margiana. This is also true for the similar seals (Sarianidi, 1990, p. 65) and leaves no doubt about their stylistic similarity. Still closer parallels can be found between the steatite vessels from Margiana and Shahdad, especially among those decorated with circular and tooth-like ornamentation (Hakemi, 1972, pl. XI).

However, there are no grounds to think that steatite objects of Margiana and Bactria were direct imports from the Kerman oasis or from Tepe Yahya. This is documented by the presence in Margiana and Bactria of numerous seal-amulets of the Murgab style that are completely absent in the Kerman oasis. Also this statement is supported by the fact that local Margiana craftsmen widely used this stone for manufacturing beads. Moreover, the wasted samples from the manufacture of these biconical beads are even a sounder proof.

Steatite objects from Iran have already been divided into two groups of ancient and late series (Miroschedji, 1973), the Margiana collection fully corresponding to the latter. Evidence of this is the wide use of the incised technique in ornamentation. The decoration is made in the form of zigzag bands and especially in the shape of circles that besides Hissar was so far known only in south Iran (Bampur V-VI), in Shahdad and Yahya IVB. Attention should be also called to the cosmetic bottles of Margiana, as well as of Bactria, that are known from Hissar III and especially from Susa and now have been found in Shahdad and Yahya.

In light of the above-mentioned facts it seems that besides such main steatite centers as Tepe Yahya, some smaller regional ones existed, as for example, Margiana and Bactria. Their steatite objects were intended for local needs rather than for the international market. It is natural to assume that immigrants brought to Margiana and Bactria their traditions of the stone-carving technique. But in this case in spite of the mentioned parallels with the steatite objects of Tepe Yayah we still have not enough evidence to speak about the existence of a direct link between these areas. And probably it is not accidental that Shahdad with its collection of over 50 unbroken steatite objects can be considered as another center in the Kerman oasis with its traditions further traced in the steatite fragments of Margiana and especially of Bactria. As was convincingly stated by P. Amiet (Amiet, 1980, pp. 160-165), Bactria and Shahdad were

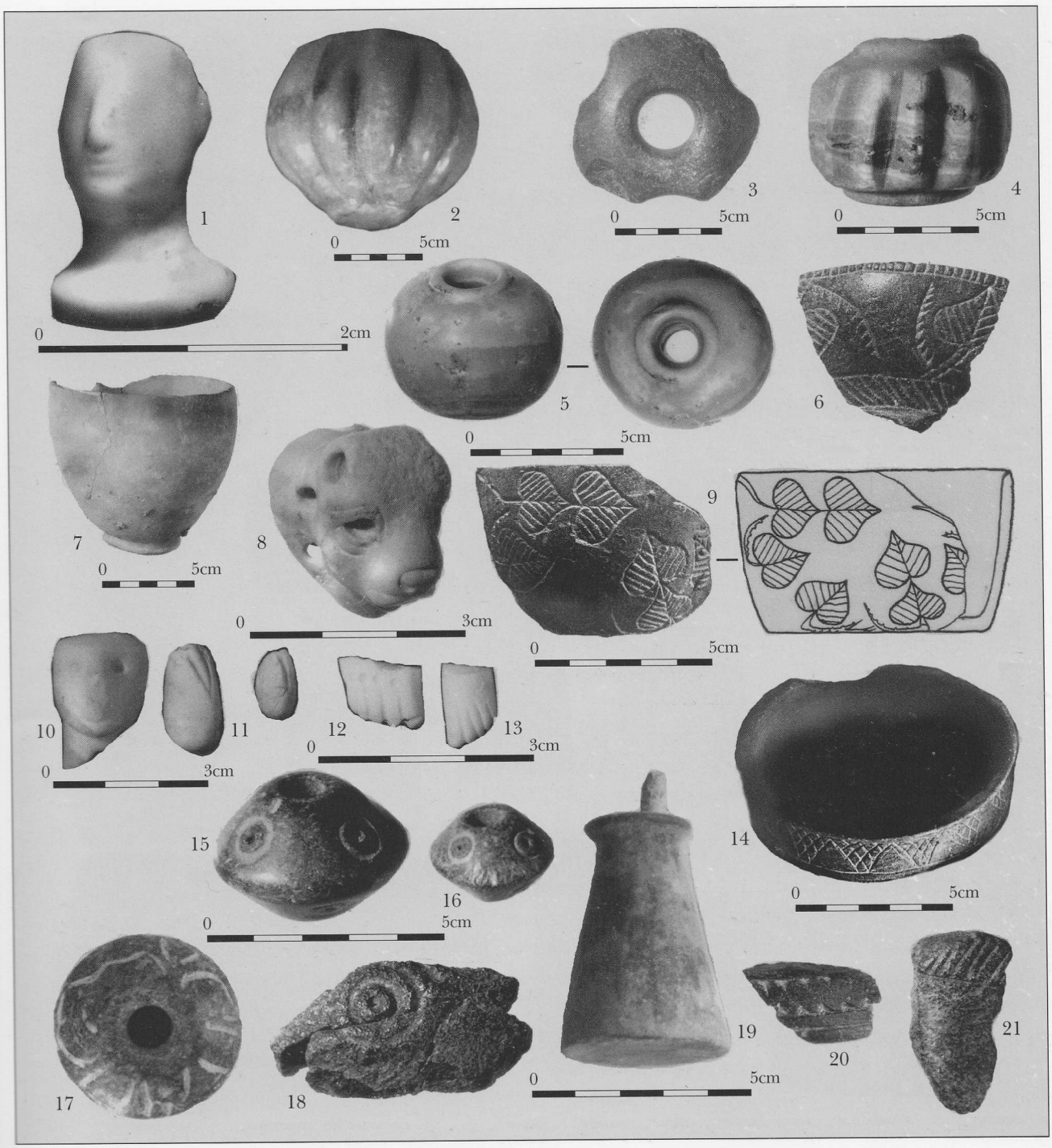


Fig. 17 Margiana. Stone objects: south Gonur temenos (1, 4-7), north Gonur palace (2, 9, 13-19), Togolok-21 temple (8, 10-12), Togolok-15 (3).

founded under the strong influence of the stone-carving art of Suziana and Mesopotamia. Now, having in mind the find from Gonur one can say that this influence has touched Margiana as well. It should be added that the small sizes of the steatite vessels from Margiana made it possible to assume that they were mainly used for cosmetic purposes, though not excluding cult use as well (Fig. 18).

Besides steatite, some other sorts of stone were used for manufacturing various small objects. This includes light-coloured half-transparent alabaster and some other types of marmoreal. Thus, of marmoreal alabaster was produced a rectangular "box", which bears traces of three half-spherical depressions on its inside bottom, probably the result of friction (Fig. 19, No 11). On a hard flat river stone of white colour was engraved a composition including a "tree" image, which subject is not clear (Fig. 19, No 4).

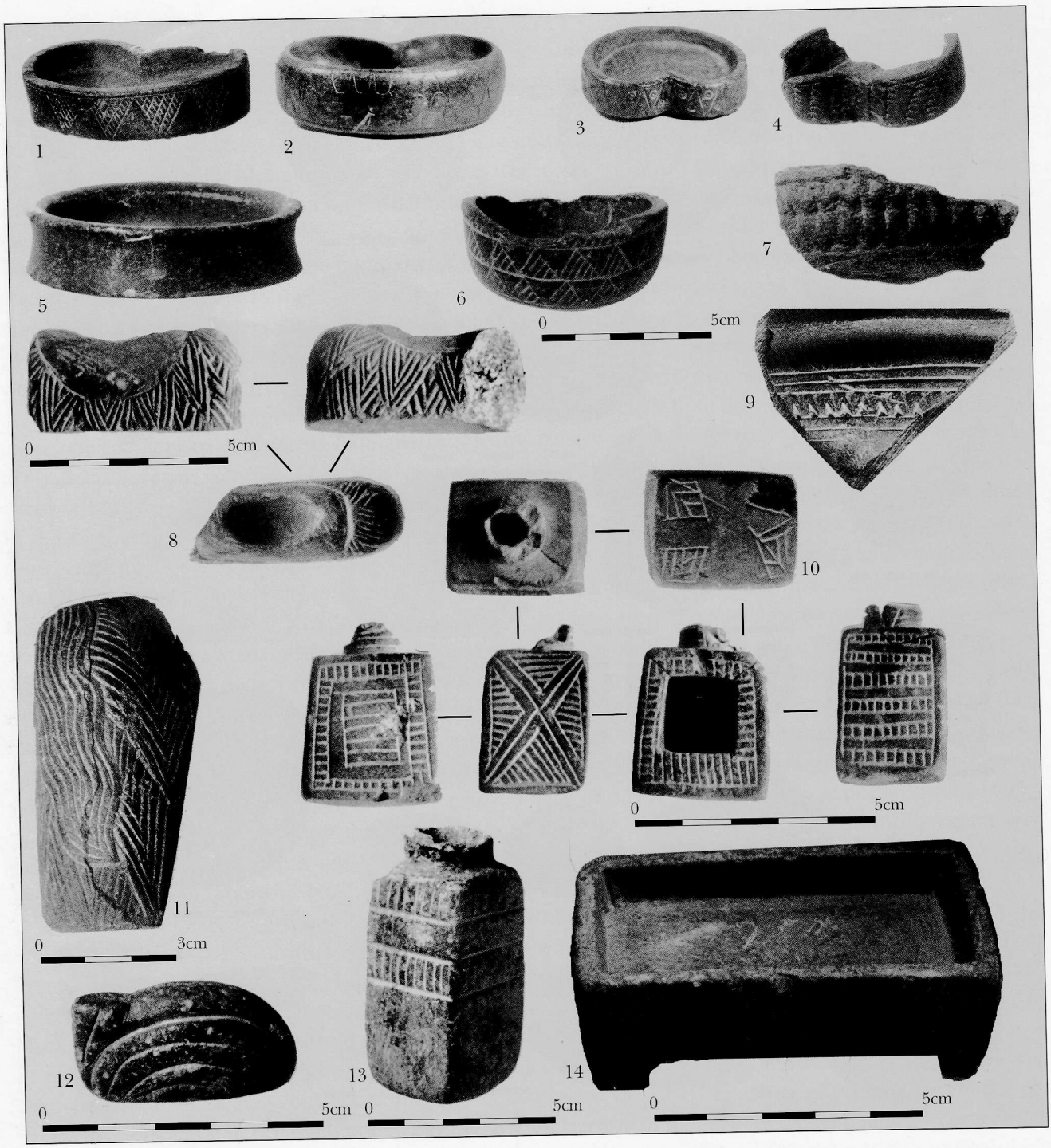


Fig. 18. Margiana. Stone objects.

A white marble miniature head from the Gonur temenos (presumably, a female) deserves special interest. Its oval face is delicately lined, a large humped nose and plump lips add to the general image of this sculptured head. The neck bottom is unbroken and instead is carefully smoothed, which can be a sign that it was fixed to the unpreserved body. The top of the head is also slightly smoothed so that it would be easy to fix a separately made hairdo or a head attire on it (Fig. 17, No 1).

This head apparently belongs to the type of the so-called composite statues from the plundered tombs of Bactria. As a rule, these figurines portray seated grand dames in rich Sumerian dresses. They are always made in the combined technique, wherein the body is made of dark, often black, steatite and is topped by a separately manufactured head. This head is always made of white stone and is often decorated with a black turban. The hands crossed on the knees are also made of white stone.

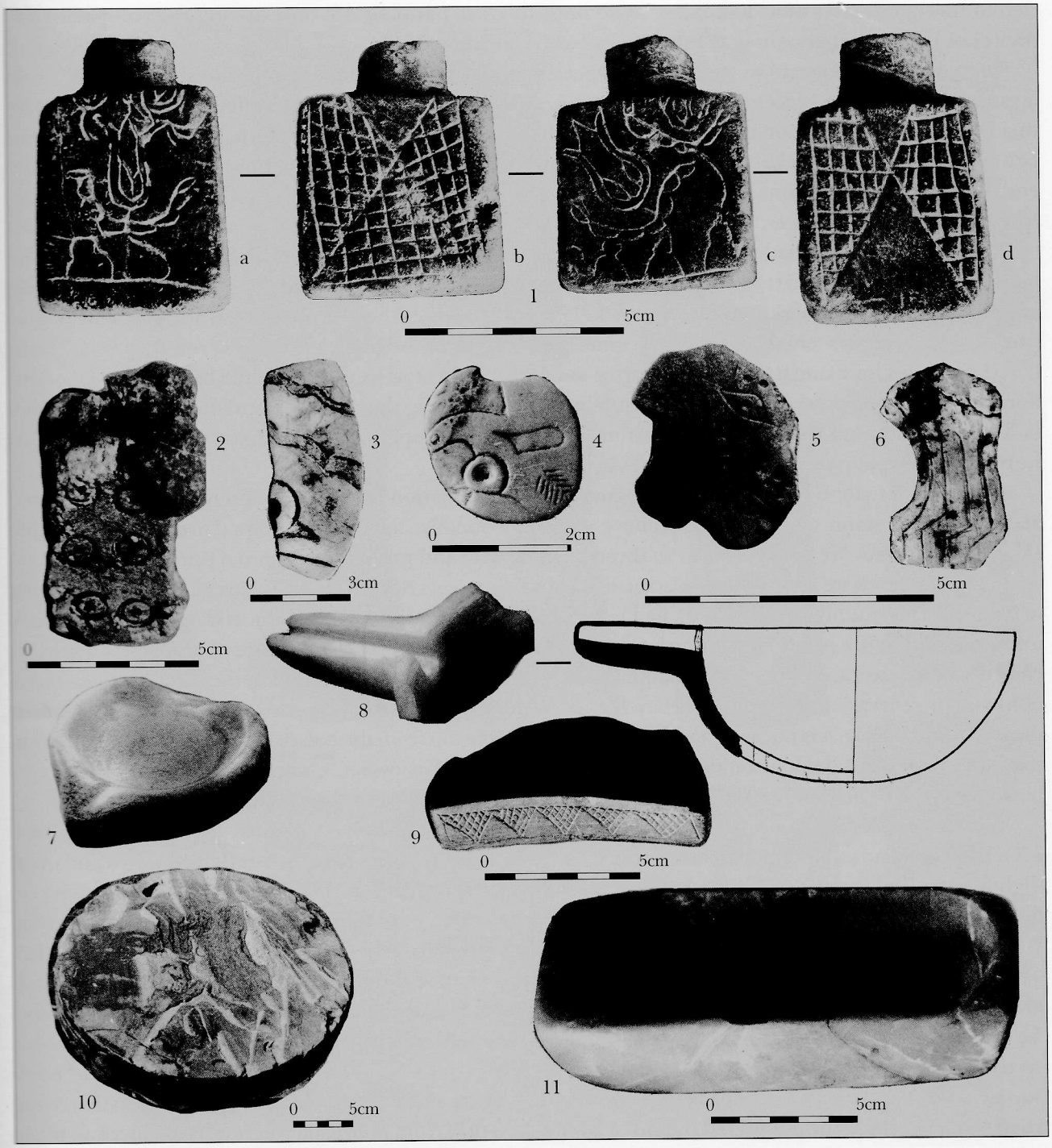


Fig. 19. Margiana. Stone objects: north Gonur palace (1-6, 9-11), Togolok-1 (7, 8).

The existence in Margiana of original "composite statuettes" can be demonstrated by the discovery in one room of the Gonur citadel. A bottom part of such a steatite statuette was found alongside another steatite fragment and they both represent a clumsy attempt to imitate the classical examples. Such statuettes, including a torso, decorated with fretwork "tongues" (Fig. 18, Nos 8, 11) and with a semi-circled low neck were found in the palace of northern Gonur (Fig. 18, No 8) and directly correspond to those of Bactria.

P. Amiet was the first to point out that the composite statuettes of Bactria closely resemble female images on seals from Shahdad and Tepe Yahya (East Iran) which in their turn reflect the traditions of Elam (P. Amiet, 1986, p. 159). M.Potier also generally supported this idea and is absolutely correct in comparing them with a female image on a silver goblet from Fars (M. Potier, 1984, p. 44-46). The same iconographical image is traced on a unique silver pin from Margiana. The design of an enthroned woman in

rich Sumerian dresses of a "kaunakes" type finds its close parallels not only among the composite statuettes of Bactria but also on that vessel from Fars (Klochkov, 1995).

The general iconographic image(and especially, the dresses of these composite statuettes) gives an impression that these objects are rather archaic. But P. Amiet has correctly called attention to the fact that the plastron decoration on the dress of one such Bactrian composite statuette has circular ornamentation. Based on this, one can relate it to the beginning of the second millennium B.C. rather than to the end of the third millennium B.C. It possibly reflected the influence from Fars that touched not only Bactria but as we can see it now, Margiana as well.

A marble bull head made in the best traditions of the ancient art (Fig. 17, No 8) also testifies to the high level of the stone-carving skill. One cannot but admire the delicate modelling of brows and nostrils, as well as the soft folds of skin under the neck. Horns and ears of the bull are not found as they were presumably made separately of some other stone. The bottom of the bull's neck was carefully polished and had three holes for fixing it as a head on top of some kind of pivot or scepter. It should be noted that modern Zoroastrians use scepters or rods topped with bulls' heads during their ritual ceremonies. A similar golden bull's head was found in a priest's tomb from Altyn Tepe and apparently it was fixed to a rod by nails that were found next to it (Sarianidi, 1990, p. 141).

Among other stone objects from Margiana we might mention small vases of semi-transparent white alabaster. They stand on high feet and have unproportionally shallow reservoirs (Sarianidi, 1990, table IV, 4). These vases are identical only to those from Bactria and probably had ritual purpose.

Various stones were used for manufacturing heads for scepters or rods (Fig. 17, Nos 2-5). These tops being of various forms (round, flat or ribbed), had holes which served for fixing them to the rod or scepter. One such top was found in the palace of the north Gonur citadel (Fig. 17, No 2). It was made of yellowish marble, its ribbed surface was carefully polished and it was larger than any other top found in the rest of the Margiana temples. In general, all the tops are believed to be items of prestige that emphasized the high status of their owners. And possibly, it is not at all accidental that the marble top from the palace differs from all the others in size and colour, thus demonstrating the exceptional position of its owner. Quite likely, this owner has combined both, the secular and sacred power, a situation that is characteristic for a highly developed society.

Various marble-like stones were used for manufacturing "miniature columns" (Sarianidi, 1990, tabl. LXXXIX) that had an undoubtedly ritual purpose. They were up to 0.5 m high, carefully polished and often slightly narrowed in the middle. Shallow grooves were often made on the butt ends as well as sometimes on the sides of the columns. Over 30 of these "miniature columns" were found in the Togolok-21 temple (Fig. 20). Two of them had "tops" made of the same stone with grooves on their outer surface (Fig. 20, Nos 11, 12). Though the exact purpose of their use is still unclear, we are on sound ground to believe that they were used in some ritual ceremonies connected with cult libations of hallucinogenic beverages of the soma-haoma type. To a certain degree our assumption is based on the Syro-Hittite seals that have similar compositions, as well as on the wall frescoes in the Mari palace (Parrot, 1959, pl. XVII). In the Togolok-21 temple two of such "miniature columns" have kept their lids (Fig. 20, Nos 11-12). Three "miniature columns" with encrustations from Hissar were found in the plundered burials of Bactria and now from Margiana where a fragment of an inlaid column was excavated in the priest's tomb from Togolok-1. Similar images of "miniature columns" are traced on the Syro-Hittite seals and especially those from Ras Shamra (Amiet) had clearly contained cult elements.

On the floors of many rooms of Margiana temples (especially in Togolok-21) stone "querns", mortars and pestles were found in such abundance that one recognizes that they were not made only for the everyday needs of a given settlement. Some of them bore the remains of poppy pollen, the plant that is still now used for the preparation of narcotics.

Mainly in the Margiana temples two-pieced objects in the shape of a conical stand were found. They are always made of black steatite and are topped with a white alabaster cylinder that has a groove on its base used for fixing it on the stand (Sarianidi, 1990, tabl. LXXXII, N 1-7). The tops of cylinders are often abraded, which possibly indicates that they were used for grinding. But at the same time it should be noted that some of them have bored holes, the purpose for which is unclear. To a certain degree they find some analogies in Anatolia (Osten, 1937, fig. 262).

Fig. 20. Togolok-21 temple. Miniature columns (1-12). From Godari Shah (13).

It is probably not accidental that in the Togolok-21 temple one such two-pieced object was found next to a crushed vessel of a clearly cult purpose (Sarianidi, 1990, p. 140). Similar types of cylinders are known in the Harappan civilization where they are assumed to be associated with phallic cults (Dales, 1984, fig. 12) which were also widespread in Margiana.

Also of a clearly ritual purpose are some tiny kidney-shaped vessels often ornamented on their outer side by simple geometrical (including circles) designs and a single case of a scale-like ornament (Fig. 18, Nos 1-4, 6). One such copper vessel was found in the palace of northern Gonur. All these designs find direct parallels in the identical objects from Bactria.

Black steatite was used for making miniature vessels with a simple incised design (Sarianidi, 1990,

tabl. XXXVIII) as well as for high-necked small bottles (Sarianidi, 1990, tabl. XXIX,N 2-4). One of these bottles from the palace (Fig. 18, No 10) has a "little door" carved into the side of the bottle and finds direct analogies in Bactria. These bottles with "little doors" are generally believed to be cosmetic bottles but one of them has remains of wormwood, the plant known for its healing and hallucinogenic qualities (see Meyer-Melikian, appendix). It may be not accidental that ceramic mid-sized vessels with a "little door" inserted are found also in Ugarit (Schaeffer, 1949, fig. 79).

We have a single find of a steatite eight-pointed star or an "emblem". Its front side is decorated with an encircled cross and its reverse side has preserved remains of copper wire and four hollows. Each point of the star has a hole at the end which was used for affixing the "emblem" (Sarianidi, 1990, p. 139). It should be added that it was found in the same layer as the altars of the Togolok-21 temple and that it has parallels only in Bactria.

On the surface of Togolok-21 tiny fragments of a human head (Fig. 17, No 10) and a feet from north Gonur (Fig. 17, No 13), both made of white marble were found. They were carefully cut and their toes delicately modelled . Some insets (square, rectangular, rhomboid) made of white stone have also been excavated. Along with these stone insets they used ones made of mother of pearl, though in very rare cases.

At north Gonur a tiny sculpture of an eagle with widespread wings made of some soft white stone was found (Fig. 25, No 9). It resembles very closely the eagle images in the heraldic posture that come from Elam and Ebla. Brown stone was used for manufacturing arrow heads often in the jet technique. They represent good examples of the best traditions of the Neolithic Age. Of great significance are fragments of some articles that have an unclear shape (Fig. 17, Nos 6, 9). They are made of black steatite and have an incised design of a "pipal", a plant typical of the Indian Subcontinent that was widely used in the decorations of the Harappan civilization. At Togolok-1 an alabaster fragment of a vessel of the saucer type that directly copies the similar ceramic forms was excavated (Fig. 19, No 8).

Bone Objects

Bone objects are found very rarely and are mainly represented by borers, awls and by pins with simple ball-like tops (Fig. 21, Nos 2-14). North Gonur has yielded one such pin with a round head with a ribbed rather than a smooth surface which finds direct analogies in Anatolia. Equally representative are pins with a scratched design in the form of slanting nets. One should note a bone object made of tubular bone that has pointed ends and is decorated with hatched triangles on its convex side. It surprisingly recalls similar ornamentation on one bone object from Alishar (Osten, 1937, p. 489). So far, only in the Margiana temples were found bone tubes, polished as a result of their long use. They have engraved images of exaggeratedly large eyes with dilated pupils (Fig. 22, Nos 3-7). Concentrations of poppy pollen were found inside the pipe and this can serve as evidence that such tubes could have been used during cult ceremonies associated with libations of hallucinogenic beverages. It is known that when one drinks such beverages he sees the surrounding objects in exaggerated sizes and maybe this fact explains why the eyes and pupils on the tubes were exaggerated. Unique are the ritual bone axes found in the temenos of south Gonur (Fig. 22, Nos 1, 2) and in the palace of north Gonur (Fig. 21, No 1).

In many Margiana settlements there were found astragals that were often carefully polished on their long sides and that were most probably used for games. Tiny bone blades of different shapes (triangles, rhomboids, squares, etc.) that often had tooth-like ends were used as insets for inlaid "miniature columns", various small boxes and caskets. Most of these objects were made of small cattle bones and only some articles were made of ivory.The square, rectangular and roundish plates in some cases were decorated with concentric circles (Fig. 22, Nos 8, 9). Also of ivory were made two sticks square in section, three sides of which were decorated with concentric circles (one, two, three such circles on each side), while on the forth one there are series of vertical and slanting incisions and little crosses (Fig. 21, Nos 16, 17). Such articles absolutely similar to our ones come from the upper stratum of Altyn Tepe dating

Fig.21. Margiana. Bone objects. From north Gonur palace: (1-14, 16, 17), temenos: (15).

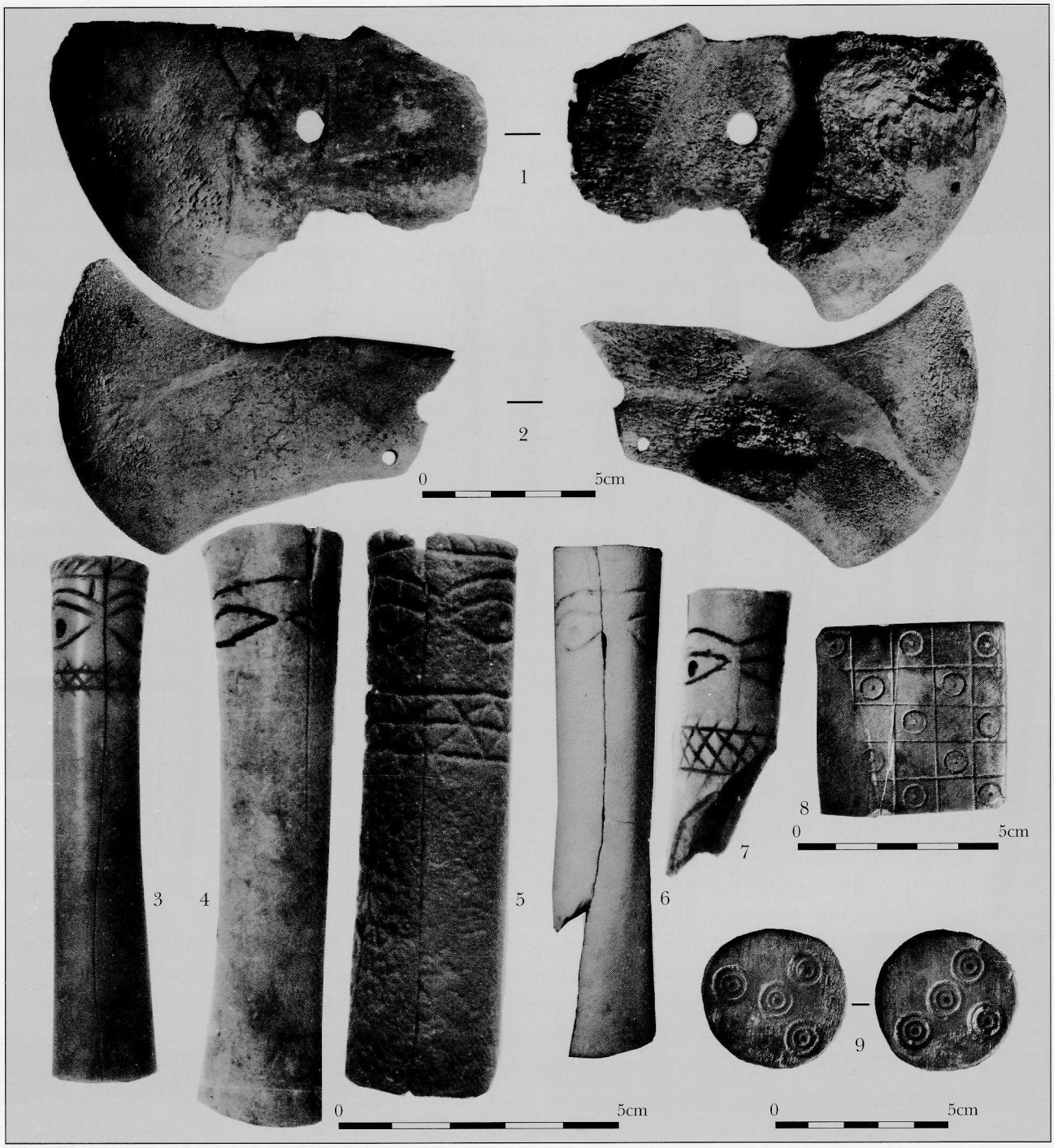


Fig. 22. Margiana. Bone objects from Gonur temenos (1, 2), Togolok-21 (3-7), north Gonur palace (8, 9).

to the BMAC period (Ganjalin, 1967, fig. 8). They are supposedly interpreted as fortune-telling sticks. Probably, it is not mere chance that all Margiana sticks have strongly rubbed ends, which is the result of their usage.

Metal Production

Special surveys of copper and bronze articles from Margiana (Terekhova, 1990, p. 177-202) have revealed two trends in metalworking: forging and casting. The latter played the leading role, thus testifying to the high skill of Margiana smiths. They used different kinds of alloys with great concentration of technologically valuable impurities. The absence of technological errors in the manufactured products is remarkable.

Most of the cast objects were later forged, especially in the production of weapons and tools, while seals and decorations lacked the forge finishing. Different techniques of free forging have been noted: circular forging, flattening, bending and reducing, as well as shaping objects with a tetrahedral cross section. Cold forging was combined with intermediate annealing and the working parts were strengthed by a rivet.

Alloys of copper with arsenic (and more rarely with tin) were most popular among the dozens of various alloys. Casting is presumed to be more characteristic for large settlements, whilst forging was mainly used in the small ones. In other words, the metalworking production was an independent field of the paleoeconomy, this serving as additional proof of the high level of craftsmanship, as well as of the high level of society in general.

Though most of the metal objects were found on the surface of the ancient Margiana settlements, practically all of them find their typological analogies in copper and bronze articles from the excavated sites. The most common articles include awls, needles, piercers, and borers (round, oval or square in cross section), one of their ends always being sharp (Fig. 23, No 1). The excavations at north Gonur have yielded needles and fish hooks with loops, and knives and swords sometimes with a longitudinal groove. There are isolated finds of the first flat arrow heads with two feathers and a rod. One arrow head was found in the tomb in the breast of a grown-up man (Sarianidi, 1990, p. 161). In the Togolok-21 temple were found five flattened lead "plates" (Fig. 25, No 6) that were carefully hidden together under the wall of the building.

Exceptionally significant is a unique copper and bronze hollow ball with cut-through crosses and some small pebbles inside of it. A loop-shaped handle may serve as evidence of the existence of large (up to 0.5 m) copper and bronze cauldrons.

Special attention should be called to some of the definitely ceremonial copper and bronze axes with purposely blunted blades and a "cock's tail"- shaped butt and with sockets often engraved with designs of human eyes (Fig. 25, Nos 1-3). Identical axes are found only in Bactria and in east Iran (Shahdad) and such rare finds in Luristan are believed most likely to be imported from the east, presumably from Bactria. The temple of Togolok-21 has yielded another type (Fig. 25, No 5) of axe with a rather broad and blunt blade, the socket being topped with a small pyramidal head (Sarianidi, 1990, p. 145). This clearly recalls axes from Bactria and both types are believed to have their origin in axes-halberds of the Akkadian period (P. Amiet, 1977, tabl. V). In the fire temple at north Gonur, a bronze axe was found (Fig. 25, No 10).

Curved sickles have serrated blades (Fig. 24, Nos 6, 7), massive chisels (Fig. 24, No 12), round mirrors with a hole on one side or, more rarely, with handels are known as well. Of tools one can mention hoes (Fig. 24, Nos 14, 15); small vessels had already been in evereday usage. Bracelets (including twisted ones), rings, ear-rings and especially pins with figured heads including those in the shape of double spirals, biconical heads widely spread in Near East, dominate among the adornments. But only in Bactria are known slightly curved heads probably of wooden staffs, one edge of which is flat, while the other is decorated with teeth. One such head coming from a north Gonur tomb (Fig. 24, No 13) was a symbol of power of his owner. Still remains unclear the destination of "daggers" with rounded ends of blades and pivot handles curved like a snake (Fig. 24, No 11), paralles to which are known only in Bactria.

Gold and silver jewelry was also known at that time (pins, ear-rings). Open molds were used for casting the compartmented seals.

Especially noteworthy are the isolated finds of small iron fragments from the surface of the Late Margiana sites. In the rooms of the Togolok-21 temple two small iron beads were found. In one of the rooms of the Gonur temenos a fragment of the blade of a knife made of iron was excavated. This is a very significant find since specialists have concluded that it was made of artificially manufactured iron rather than from the meteorite that had landed in Near Asia in the last centuries of the second millennium B.C. A mould of an eagle in a heraldic pose (Fig. 25, No 9) comes from the surface of north Gonur.

Among the accessories used for decoration one should note tiny copper and bronze bottles with a roundish body and a high neck. These are presumably cosmetic bottles that were exact copies of the ceramic examples. The metal and the ceramic cosmetic bottles find the most direct analogies in Bactria and east Iran. There is an isolated find of a copper and bronze "seal" in the shape of a hand with a wicker design on the inside.

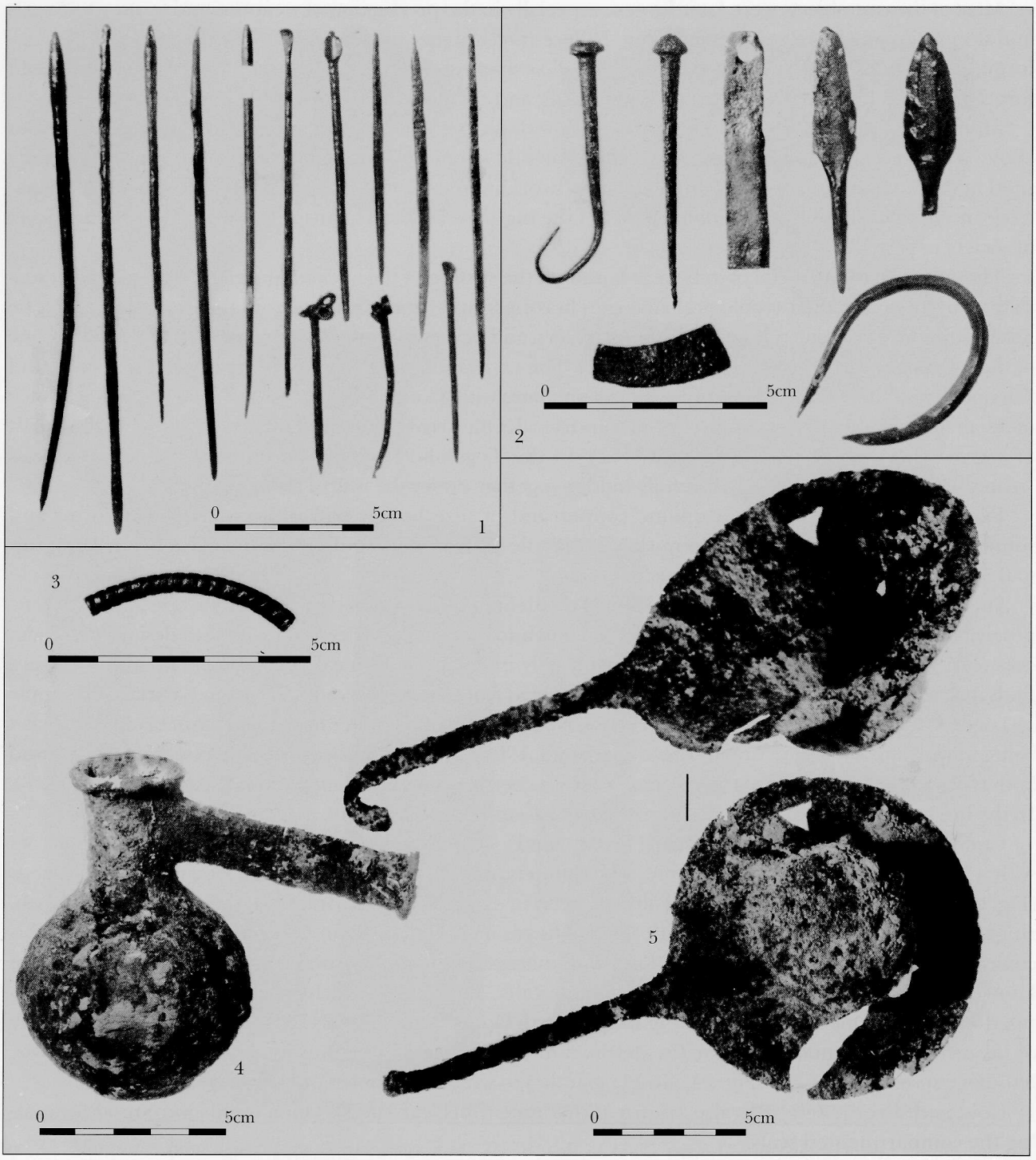


Fig. 23. Margiana. Copper-bronze objects (1-3); Temenos (4), the priestess tomb from Togolok-1 temple (5).

Pins topped with a specific bud or flower form (presumably, a poppy) stand out among the numerous copper pins with simple round, conical and biconical tops. Similar pins were found in Bactria. The Gonur temenos has yielded a pin with a hand-shaped tip with a flower held in the fingers (Fig. 25, No 7). It looks exactly like certain Bactrian pins. Four silver pins were found in the tombs of north Gonur (Fig. 27, No 1). The heads of two of them had a hand shape either open or squeezed into a fist. The third one was decorated with some loosely hung rings. Such hand-shaped pinheads are known in Mesopotamia (Woolley, 1934, pl. 189), as well as in Bactria.

The fourth pin (Fig. 34, No 1) was fashioned in the best traditions of ancient oriental art. Its top depicts a grand dame in rich dresses of a Sumerian "kaunakes" type. It can be considered as a compartmented seal

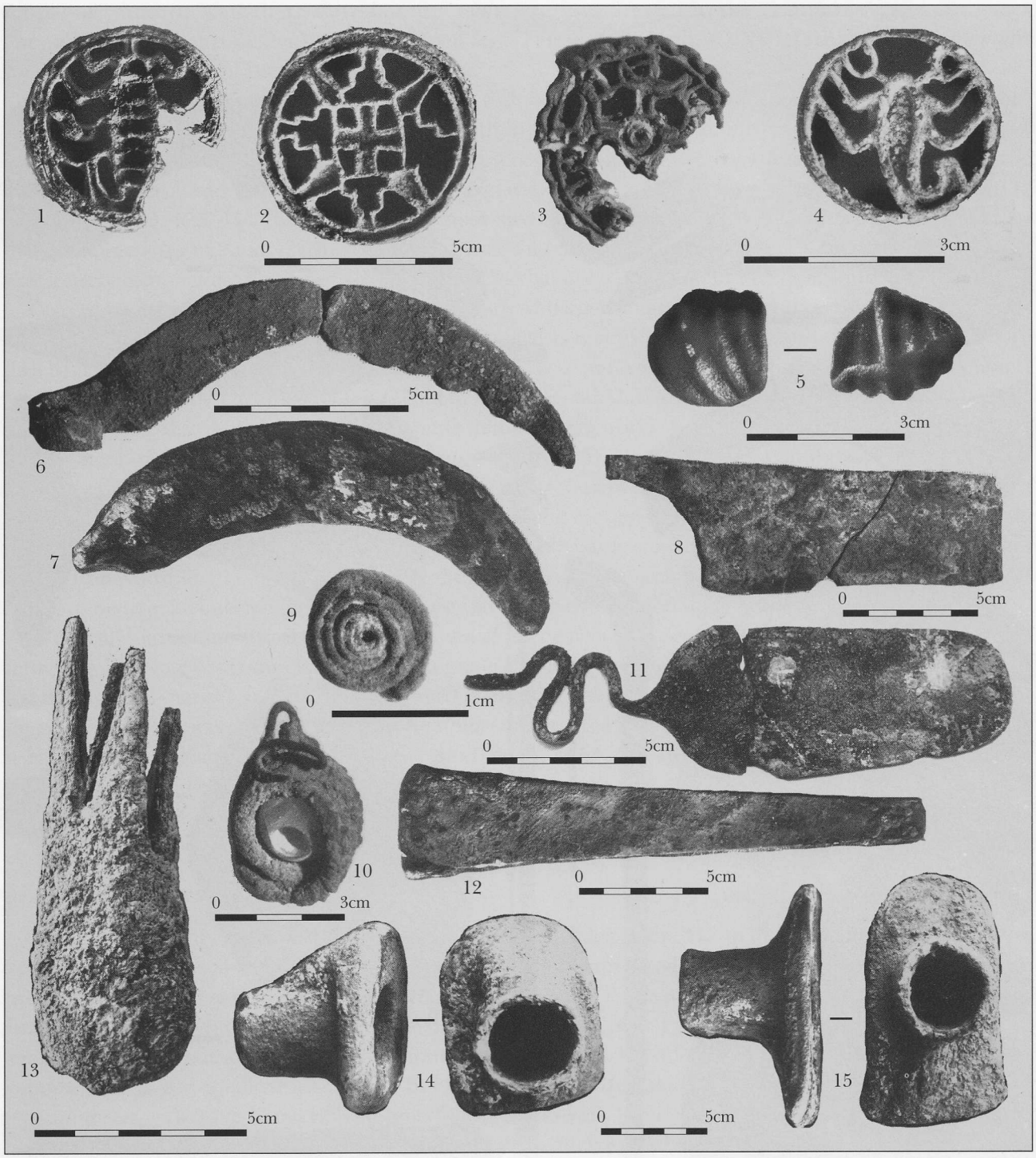


Fig. 24. Margiana. Metal objects from north Gonur palace (1-3, 5-15) and Gonur cemetery (4).

cast in a closed form, attached later to a pin. It differs from an ordinary seal, because instead of a handle-loop on the reverse side, the craftsman had soldered a long pin pivot to the back of the figure's armchair so that the pin acquired the form of a woman seated on a throne. The local production of the pin is demonstrated by the fact that the pinhead was cast in the compartmented seal technique that was characteristic only for "Outer Iran".

The iconographic and stylistic similarity of this statuette with the so-called composed statuettes of Bactria has already been mentioned (Sarianidi, 1995). This shows its probable Elamite origin (Potier, 1984; Klochkov, 1995). It is quite possible that this image was copied from some Elam prototype and then was brought to Margiana. On the other hand Elam was probably an intermediate place since in the

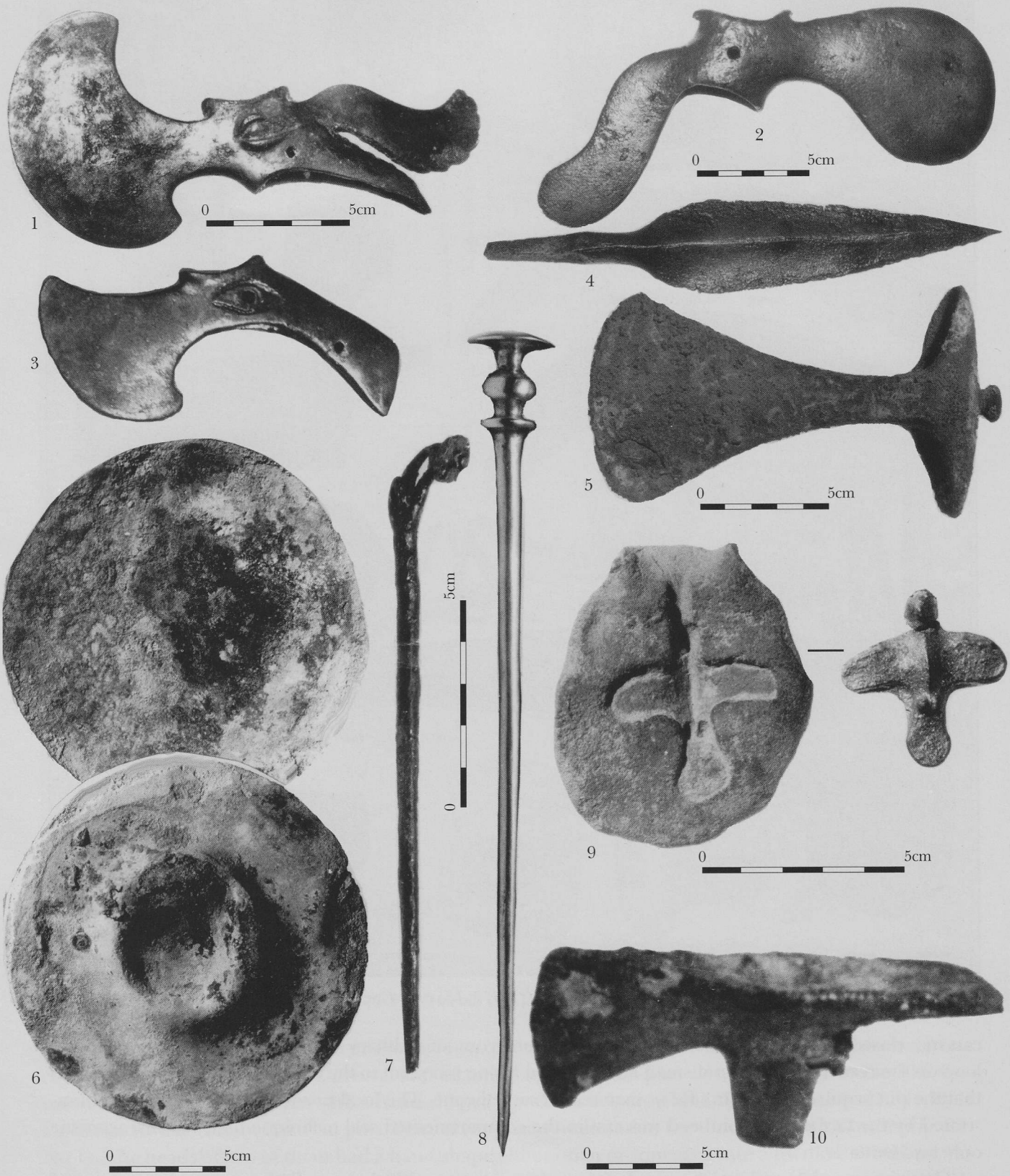


Fig. 25. Margiana. Copper-bronze objects (1-8, 10). Stone mould and an eagle cast in it (9).

temple of Ishtar in Mari there were found female figurines dressed in the "kaunakes" type of dresses. They are seated on thrones with animal-shaped legs (Parrot, 1956, tabl. XXXVIII) that find parallels with the image of a throne on the pin from Margiana.

At north Gonur a copper pin was excavated with a head in the form of a sculptured figure of a bull that was very similar to those from Bactria. Another pin from the same settlement deserves exceptional interest. Its top is made in the form of two short pieces ending with two flat rings. These tops are characteristic for Bactria and besides Bactria and Margiana, they are found only in Anatolia, in Kanish (Ozguch, 1986, tabl. 125, 15), the latter in their turn having parallels with the silver pins of Troy II and Biblos. At many sites in Anatolia, including Hattusa, there were widespread pins with ribbed tops and/or with loosely hung rings (Boehmer, 1979, tabl. XIV) that are also found in Margiana and Bactria.

Gold was used for making rings (or ear-rings), beads with open and sharpened ends;in one earth grave there was found a pendant in the shape of snake's head as well as quadruple spirals that were well known in Syria (Tell Brak, Mari), in Anatolia (Alacha, Dorak, Troy II), Greece (nine tombs in the Mycenae) and in Poliochni. In Poliochni they are dated to 2300-2000 B.C. and in Mycenae and Mari to 1600-1300 B.C. (Culican, 1964). From the review on the distribution of quadruple spirals in the Aegean world (J. Huot) and in Iran (J. Curtis) as well as in the system of the whole Near East (Peltenburg, 1997, fig. 3) it is clearly seen that the find from Margiana marks the most easternfar point of their distribution.The earliest of these images are found on the early seals of Anatolia and north Syria (Maxwell-Hyslop, 1989, p. 219) and are assigned to the end of the IV-beginning of the III mil. B.C. From this centre the quadruple spirals were obviously spread through the Near East and reached "Outer Iran" including Margiana. In this case the finds of similar objects in Talish (the cemetery of Marlik) can mark this point as an intermediate one on the way farther to the east and up to Margiana.

Especially significant is a silver pin with its head in the shape of two disks with a flattened ball between them (Fig. 25, No 8). It comes from the earth grave that is located next to Gonur and clearly belongs to the first immigrants that colonized Margiana. Moreover, it is probably not at all accidental that similar types of pins with such tops were most popular in Anatolia (Boehmer, 1972, tabl. XXIV, p. 578, 562) and especially in Hattusa, the capital of the Hittite kingdom (Blegen, 1963, fig. 18, Muller-Carpe, 1974, fig. 31). Even more analogies show such pins from the graves of Chagar Bazara and Assyria where they belong to the 2000-1700 B.C. (Mallowan, 1937, pl. XVI).

Ornaments and Small Articles

The great majority of these items was found on the surface of the Margiana sites and only a few come from the excavations and cemetery. The ornaments are represented by small beads, pendants and necklaces made chiefly of common or semi-precious stones (such as turquoise, lapis lazuli, carnelian); a few of them are ceramic. White marble-like stone (rarely, mother of pearl) was used not only for manufacturing small decorations but also for making insets that were used for adorning inlaid "miniature columns", wooden caskets and small steatite boxes. In chamber 191 of the palace of north Gonur there were found gypsum insets with wave-like scribbled lines painted over with black colour (Fig. 26, No 1).

Two gypsum wings with well-pronounced feathers, which probably belong to some sculptures not survived, were found in one room of the Gonur palace (Fig. 26, No 2).

One has to mention a ceramic "envelope", a hollow ball with a great number of holes, inside of which there were 12 ceramics flatted balls (Fig. 11, No 4). To a certain degree, this "envelope" looks like those from Mesopotamia (Schmandt-Besserat, 1995, fig. 4) and Susa (Amiet, 1986, fig. 26-28).

Among the pendants one should mention schematic images of wild boar muzzle. Tiny mushroom-shaped items cut of white or black stone were found both on the surface and from the excavations of Gonur and Togolok-21. Formal analogies to these articles are found in the Harappan civilization where they are defined as decorations (Mackay, 1969, Nos 10, 11, 16).

Silver ear-rings (Fig. 24, No 5) were found in a tomb on the palace and one of its rooms has yielded a stone bead wrapped in a silver spiral (Fig. 24, No 10), as well as a fragment of a spiral that belonged to a pinhead (Fig. 24, No 9). Also an attention should be paid to two bronze sickles (Fig. 24, Nos 6-7) and a presumable razor.

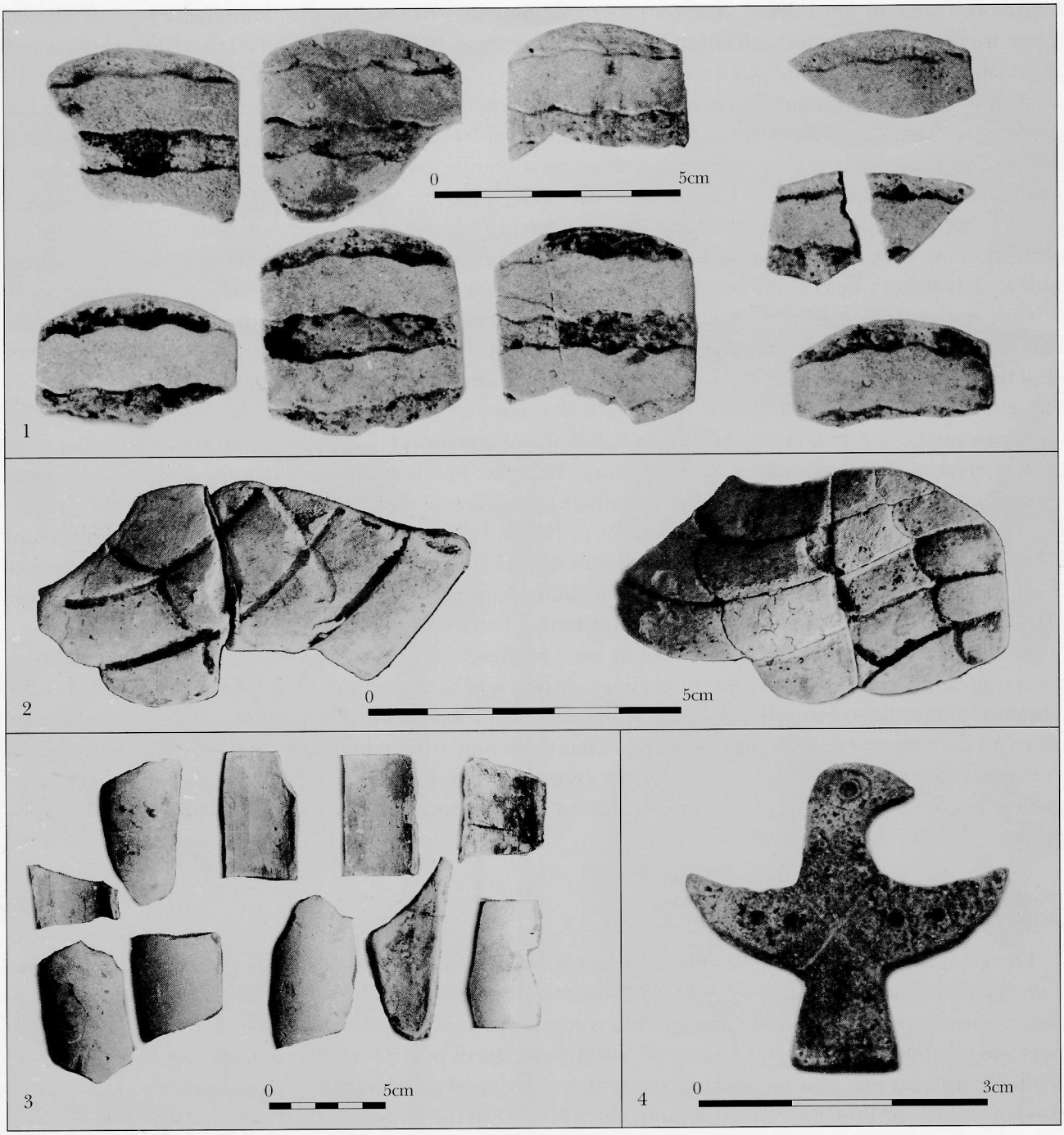


Fig. 26. Margiana. North Gonur. Palace. Chamber 191: gyps painted insets(1), gyps wings(2), gyps flutes(3). A "faience" eagle from cemetery of Gonur (4).

Glyptics and Seals

A rather representative collection of copper and bronze compartmented seals of Margiana was made of the objects found mainly during the excavations of the sites rather than gathered on their surface (Fig. 24, Nos 1-4; Fig. 29). These seals are cast in closed moulds and always have a loop-handle on their reverse sides. In this aspect they differ from amulets (mainly, stone ones) that always have a hole cut through along their longitudinal axis. They spread mainly through Margiana, south Turkmenistan, Bactria and east Iran and to the west of the axis line Hissar-Shahdad-Yahya. They are very rare elsewhere and the few known ones are definitely imported from that center.

The form of these compartmented seals is either round, square or triangular, usually with a geometric design (crosses, swastikas, rosettes) or, in rare cases, with a zoomorphic design (birds, animals, reptiles,

scorpions) on their front side. They were apparently exported far beyond their boundaries of manufacture, this being demonstrated by the compartmented seals found in the Indus Valley (Joshi, Parpola, 1987) and in Syria, in Mari.

Throughout the whole Near East the stone amulets of the so called Murgab style represent a special and rather characteristic group of glyptics, showing definite signs of similarity. The majority of these seals are made of soft, easily processed dark grey (almost black) steatite. Sometimes they are made of other kinds of stones, as for example, of lapis lazuli and turquoise that were locally mined in Central Asia. Isolated examples of amulets were not cut of stone, but cast of copper and bronze.

The most popular shapes of amulets are round, square or rectangular, sometimes they have a rhomboidal shape with tooth-like edges. They all have one perforation for a cord except for the rhomboids which have two holes on each of the opposite ends of the rhomboid. One can suggest that two parallel cords were used, in this case making a kind of a necklace. The majority of amulets have lentil-shaped cross sections with the exception of the round and rhomboid ones, which are always flat. The female terracotta statuettes help us to reconstruct the way these amulets were used. Some of these statuettes have preserved on their necks the engraved traces of cords and on their breasts are seen some protruding rings that most probably represent amulets (Fig. 16, Nos 4, 5). As a rule the amulets have images on both sides and are made in the technique of excised drilling and then usually smoothed with an abrasive (Fig. 27, No 4).

The simplest designs are geometric (including the cross-shaped figures), phytomorphic (resembling most closely ephedra and poppy), zoomorphic and anthropomorphic. Besides the two-sided amulets there are found rare examples of three-sided prisms with each side of the prism being engraved (Fig. 27, No 5).

Alongside the simple designs/symbols (plant, crawling snake, etc.) there existed more complicated subject compositions. The most popular subjects of these compositions were images of realistic and fantastic animals (in rare cases, birds)with reptiles engraved under their bellies, trying to reach the hind legs of the main personages. Sometimes these dragons appear from under the hind legs of the animals. They clearly look like snakes, often aggravated, with wide open jaws and furious eyes. One amulet from Margiana has a definite image of a male tiger and a coiling snake that tries to reach the tiger's phallus and this design helps one to understand the semantics of all such compositions. This is an often-repeated subject of most of amulets from Margiana, thus clearly reflecting the idea of stealing the "semen of life" from animals (rarely, from birds), an image that personifies the continuity of life. According to the apt expression of P.Amiet this "phallic symbolism" was equally popular in Bactrian glyptics. This fact leaves no doubt that apart from a mere similarity of amulet designs we can speak of the existence of common mythological ideas. And the most popular canonical design used in Bactria and Margiana was an image of a winged lion in profile with wide open jaws and a tail thrown over the animal's back in such a way that the tip of the tail is seen from behind the wings. Under the lion's belly is always depicted a snake or a myriapod that is stretching up to the hind legs of the animal. Sometimes instead of the usual snake or a myriapod we can see a coiling snake with a forked tail that is believed to represent a serpent-dragon. In some cases, from behind the animal's hind legs one can see a crawling dragon in an aggressive posture that seems to resist the "semen of life" from being stolen. The fact that besides the real creatures, the fantastic ones also try to steal the "semen of life" can testify that the complicated character of such compositions is full of deep philosophical meaning.

One can almost be sure that these subject (and often narrative) compositions were a sort of "quotations" or "theses" of the myths popular among those people. There is every reason to believe that these compositions reflected the idea of a struggle between positive (snakes, myriapods) and negative (serpent-dragons) creatures in their eternal attempt to obtain "the semen of life" that symbolized the origin and continuity of life. In other words, this is a struggle between positive and negative ideas that in the long run reflects the battle between Good and Evil that was the general philosophical principle of local society.

The people of ancient Margiana regarded the serpent-dragon as an Evil power, this being proved by amulets that depicted braid-like patterns or whorl designs formed by serpent-dragons devouring each other. In all times people have considered such an act disgusting, and scenes that showed a creature de-

Fig. 27. Margiana. Stone amulets from Gonur: temenos (1, 2, 4, 5), palace (7), cemetery (3); from Togolok-21 (6).

vouring its own kind produced revulsion in the viewer. For this reason one can be almost sure that serpent-dragons devouring each other depicted negative creatures. On the contrary, reptiles, scorpions and various myriapods were looked upon as positive ones, as creatures that symbolized Good and every kind of Prosperity. So the "semen of life" that symbolized the prolongation of life and fertility was the object of struggle between Good and Evil creatures.

This statement can be clearly proved by an amulet of a dark cherry colour from the Margiana settlement. One side of it depicts a "braid" formed of intertwined serpent-dragons eating each other and on its reverse side is an eagle in the heraldic posture symbolizing power, both of which were essential for ancient people. The same idea was even more strongly reflected on another amulet. On its one side we can see a startled antelope that was running away in great panic. From the front it is being attacked by a

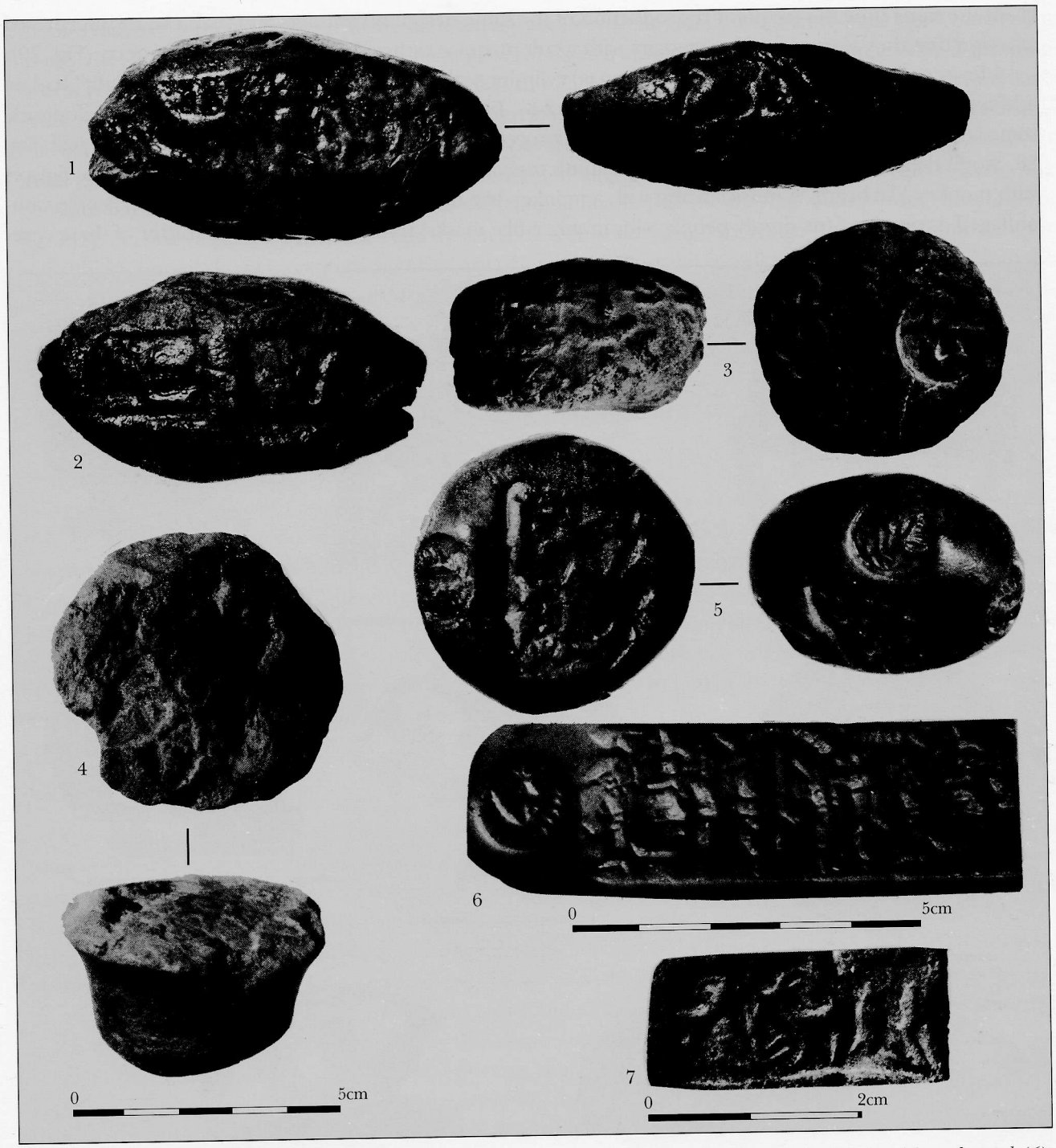


Fig. 28. Margiana. Temenos. Bullae with impressions (1-5, 7), Togolok-1: modern impression of cylindrical seal from the tomb (6).

serpent-dragon while another dragon with a forked tail is trying to reach up to its hind legs. On the reverse side of the amulet is a centrally located bull in a peaceful posture. Dragons are assaulting it from above and from the front and under the bull's belly we can see a coiling snake. Here again we can trace the same general idea of stealing the "semen of life" by various dragons and snakes.

Amulets with a flying eagle carrying a tortoise or a coiling snake witness the existence of an exceptionally rich mythology of the people of Margiana. The designs on the amulets could have been a kind of illustration of some of the local myths.

Not only amulets but also their impressions and the impressions of compartmented seals were found on some clay bullae and ceramic boxes, especially on those from the household rooms of the Gonur temenos (Fig. 28, Nos 1-5, 7). This fact undoubtedly proves that these impressions were used as symbols of proper-

ty. At the same time the frequent reproduction of the same design on amulets and seals can be interpreted as a sign that they were used as protectors with a cult purpose rather than as symbols of property (Fig. 29).

A few stone (more rarely, copper and bronze) cylinder seals made in the shape of a small "weight" had an additional design on their butt end (Fig. 27, Nos 2-3). In one grave one such seal was excavated alongside some others of the usual Murgab style and this fact proves their simultaneous existence. This cylinder seal (Fig. 28, No 6) depicts a scene with an acrobat jumping over a pole that is held by two anthropomorphic figures with monkey-like heads. A musician also with a monkey-like head is playing a large tambourine. People camouflaged as monkeys (or simply people with monkey-like masks) testify to the secret character of these cere-

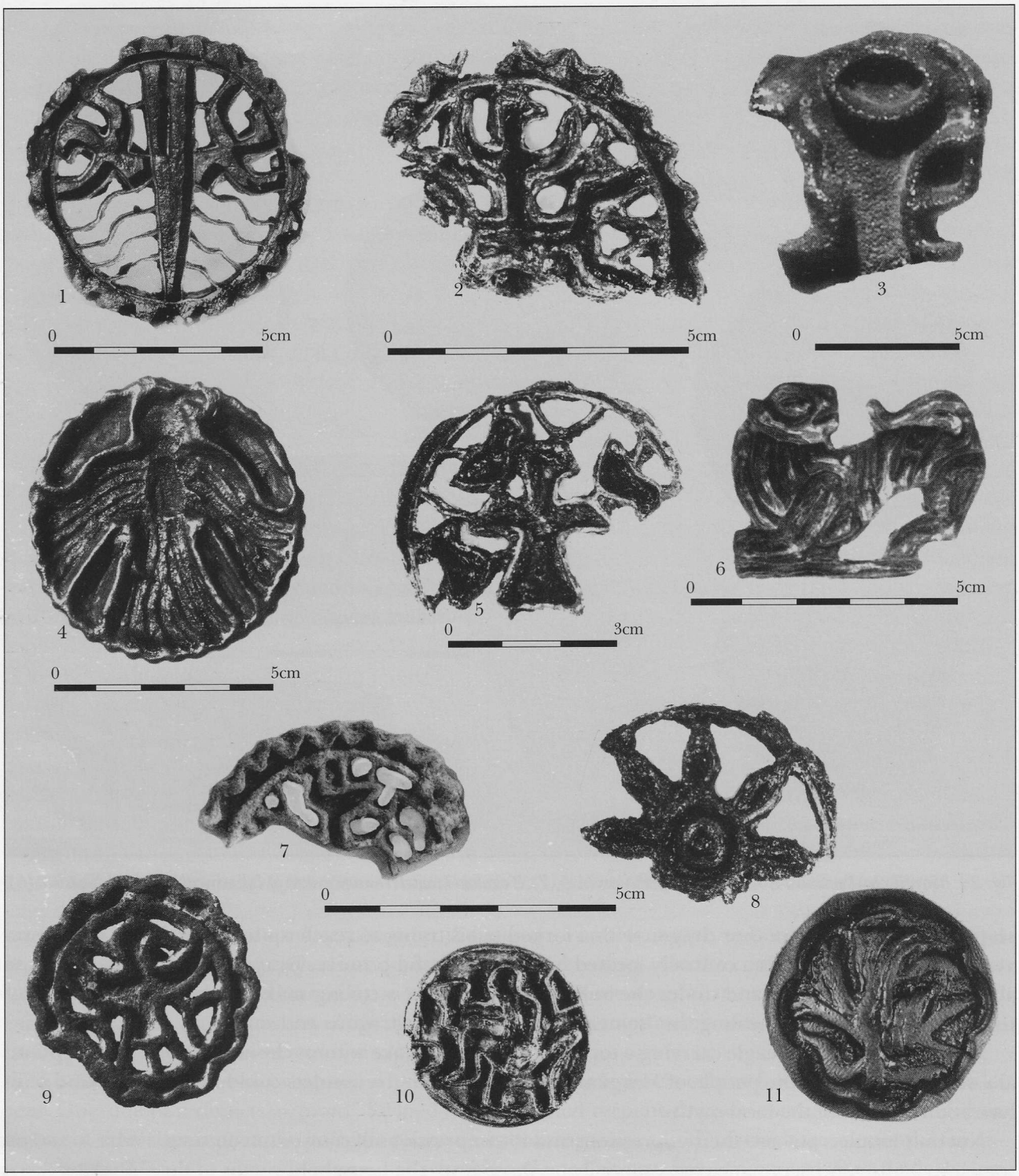


Fig. 29. Margiana. Copper-bronze compartmented seals.

monies that to a certain degree recall the Eleusian mysteries or some rituals of a "sacred marriage". Surprising as it is, the subject of acrobats is repeated on another Margiana amulet. On this amulet an acrobat is jumping over a running bull, a scene that has close parallels in the Mycenaean-Minoan culture. Apparently, we have every reason to believe that in Margiana there existed mysteries during which specially initiated people in animal masks accompanied by the loud sounds of tambourines played acrobatic games that clearly expressed cult ideas (Sarianidi, 1976; Sarianidi, 1990). It was mentioned long before that in the Hittite religious scenes the constant participants are the musicians, often with animal heads, that are playing tambourines (Bittel, 1976, fig. 143). On one vessel from Inandik Tepe we can see a scene of a "sacred marriage" that is very important for our subject, since it shows some musicians that are playing a tambourine as well as an acrobat jumping into the air (T. Ozguch, Inandiktepe, 1988, pp. 100-105). This picture vividly recalls the scene on the Margiana cylinder. It is significant to mention that such scenes with acrobats and people playing tambourines are characteristic for the Aegean and Anatolian world, being practically unknown in Iran, Afghanistan and Mesopotamia.

Isolated cases of three-sided prisms are found in Margiana (Fig. 27, No 5) and some of them show bulls seated with legs crossed, a position that finds close parallels with similar compositions from Syria and Anatolia.

Concluding this short review of the glyptics and seals of Margiana, one cannot but notice its close resemblance to (if not identity with) the Bactrian amulets and seals. These analogies clearly speak for the existence of similar images and compositions in the two historical regions whose art reflects similar mythological ideas and epic stories. Moreover, there is every reason to believe that similar seals and amulets spread into east Iran (Shahdad, Tepe Yahya) and Baluchistan (Mergharh, Sibri) thus offering evidence that they were brought to "Outer Iran" in the second millennium B.C. by immigrant tribes from the west. It should also be noted that glyptics and seals of the BMAC are in fact the only source that allows us to study the intellectual world of the people whose writing system has not been found yet. That is why seals and amulets so far found only in Bactria and Margiana can help a great deal in our attempts to reconstruct the ideological representations of the ancient people.

Burials

The archaeological excavations make it evident that during the second millennium B.C. in Margiana there existed several burial rites. Thus, the ruins of the abandoned ancient farming sites were often used as cemeteries by the people of the near-by settlements. A simple burial pit was usually dug in the cultural layer of the abandoned settlement and the deceased with burial gifts was placed in it. The usual position of a corpse was on its side, contracted, and with the head oriented primarily to the north. Right till 1997 anthropological studies in Margiana have not been carried out, but still we are able to state that the majority of skeletons were lying on their right sides and only in rare cases they were found on their left sides, this including a skeleton with a baby and some apparently pregnant women.

Most of the pits had one body, in isolated cases there were burials for two and only in one case three people were buried in one grave. Children were buried both in plain graves and in large vessels of a pythos shape and the vessels were often capped by ceramic sherd or in rare cases by another vessel. In one such large vessel a skeleton of an adult man was found. (Fig. 30).

Funeral gifts consisted mainly of ceramics and to a lesser extent of different personal decorations (earrings, rings, pins, bracelets, cosmetic bottles, mirrors, beads, amulets, as well as steatite biconical beads with circular ornamentation). The burial pits are not plastered, with the exception of one pit where the floor was covered with thick layer of white gypsum.

Besides such simple grave pits there existed some others in the form of a rectangular brick tomb (with a vaulted top) intended for an individual burial (Fig. 31). Such a cemetery was found next to the Togolok-24 settlement and was made in the cultural layer rather than in the soil ("takyr"). Several such tombs has been found in the upper layer of north Gonur on the ruins of former rooms.

There are single burials that contain a skull and bones neatly placed in one small pit. In the temple of Togolok-21 such pit was found next to the altar square. In this aspect we would like to discuss a burial that was made in the premises of the Togolok-1 temple. No skeleton was found in this pit except for the

phalanges of hands and feet gathered in a pile. The burial was untouched and an obviously valuable amulet of lapis lazuli depicting a seated man was found there. These two facts may lead us to the conclusion that we are dealing with a burial ceremony of a special character. The burial from the temple of Togolok-21 as well as this one demonstrates the practice of the so-called fractional burials when they buried parts of the skeleton rather than the whole corpse. To a certain degree these types of burial ceremonies may recall the same ceremonies of the Zoroastrians who prior to burying left the corpses of the dead in the open for the access of beasts of prey and birds.

Finally, the last type of burial is represented by earth graves placed outside of the settlements. These peculiar burials were found on the west outskirts of Gonur. Though this cemetery was partially destroyed during the construction of a canal it is still clear that most of the tombs were plundered in ancient times and those that stayed undisturbed differ from the graves known so far.

The excavations showed that the cemetery consisted of catacomb tombs made in the "takyr". First they dug a vertical rectangular shaft (sometimes with steps), then in the long western side they made an undercut where a contracted dead body was placed on its side. After that, the opening was sealed with bricks. In some cases the inside of catacombs (from the floor up to the top) was first burnt with fire and afterwards a corpse was placed there. In some cases on the ancient surface there were small rectangular funeral pits. They were very shallow and filled with remains of what looks like wood burnt to the state of dust. After this, the tops of the small funeral pits were carefully covered with clay plaster.

The practice of burning the inside of a catacomb is traced for the first time in Margiana, being unknown before that time in the Near East. Probably the local people wanted in such a way to avoid the "profanation" of the earth with a corpse of the dead, but obviously this supposition has yet to be proved. Still we can say

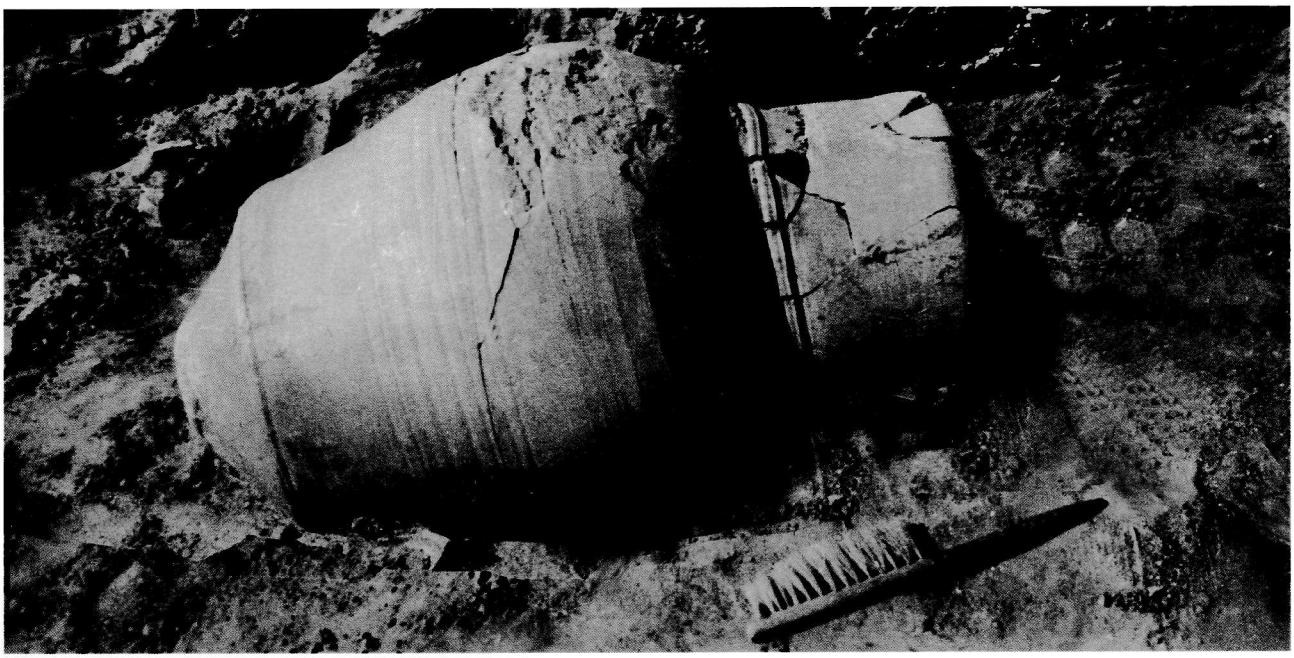


Fig. 30. Margiana. Togolok-21. Adult burial in a vessel capped with a small vessel.

that fire played an important (if not a leading) role in the burial ceremonies of the Margiana people.

On the bottom of some grave pits there were brick cist with the body in the usual contracted burial position, this practice also being original in burial ceremonies in Central Asia. The burial offerings of these graves consisted mainly of the ceramics of the Namazga V type, thus dating it to the earliest period of Margiana's existence. In addition, copper and bronze seals, decorations, stone vessels were found and one tomb yielded a golden necklace with three snake heads and quadruple spirals. All these finds are similar to those from Mesopotamia and Anatolia. While these analogies await some additional proof, the Harappan type vessels are beyond any doubt. These vessels are the perforated bottomless jars that are exact copies of vessels from Harappa and Mohenjo Daro (Marshall, 1931, Pl. XXXI, LXXXIV).

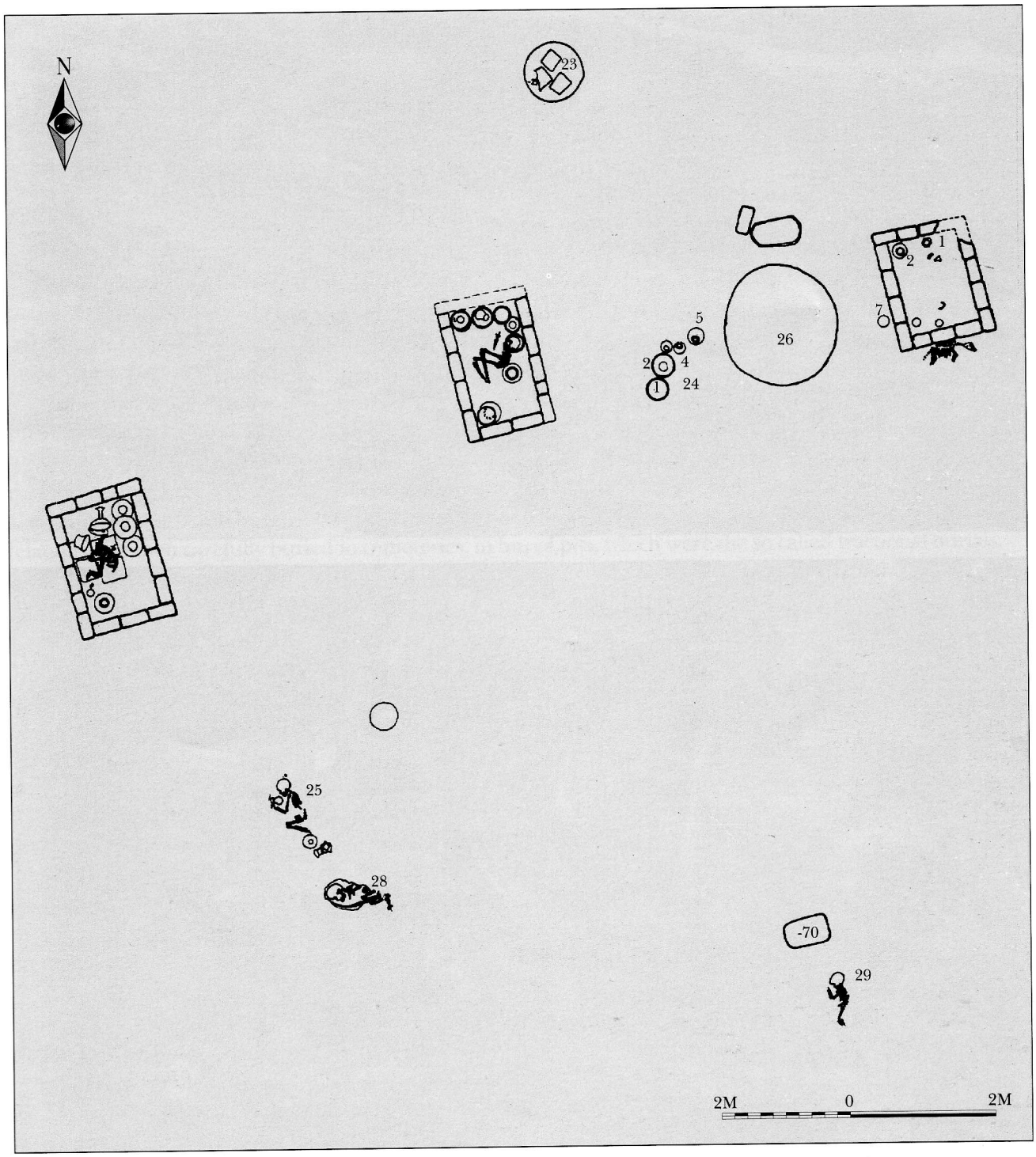


Fig. 31. Margiana. Plan of Togolok-24 cemetery.

Double-chambered tombs built of bricks on the bottom of big burial pits are an absolutely new type of burial constructions unknown before. Their rectangular chambers were communicated by a doorway and probably had semicircular cellars of bricks. Tombs were hollow inside, a niche, probably for burial offerings, being made in one wall. As an example of some later analogies may serve a burial construction also with niches that was found in Altintepe and is assigned to the Urartu period (Ozguch, 1969, fig. 6). They possibly go back to the similar (though earlier in time) shaft tombs, rectangular chambers with vaulted roofs and niches from north Syria and Anatolia (E. Carter and A. Parker).

Unfortunately, none of the excavated tombs has survived untouched, all of them were robbed in antiquity. None the less, on the floor of one tomb there were detected two skulls and several long bones, the skull

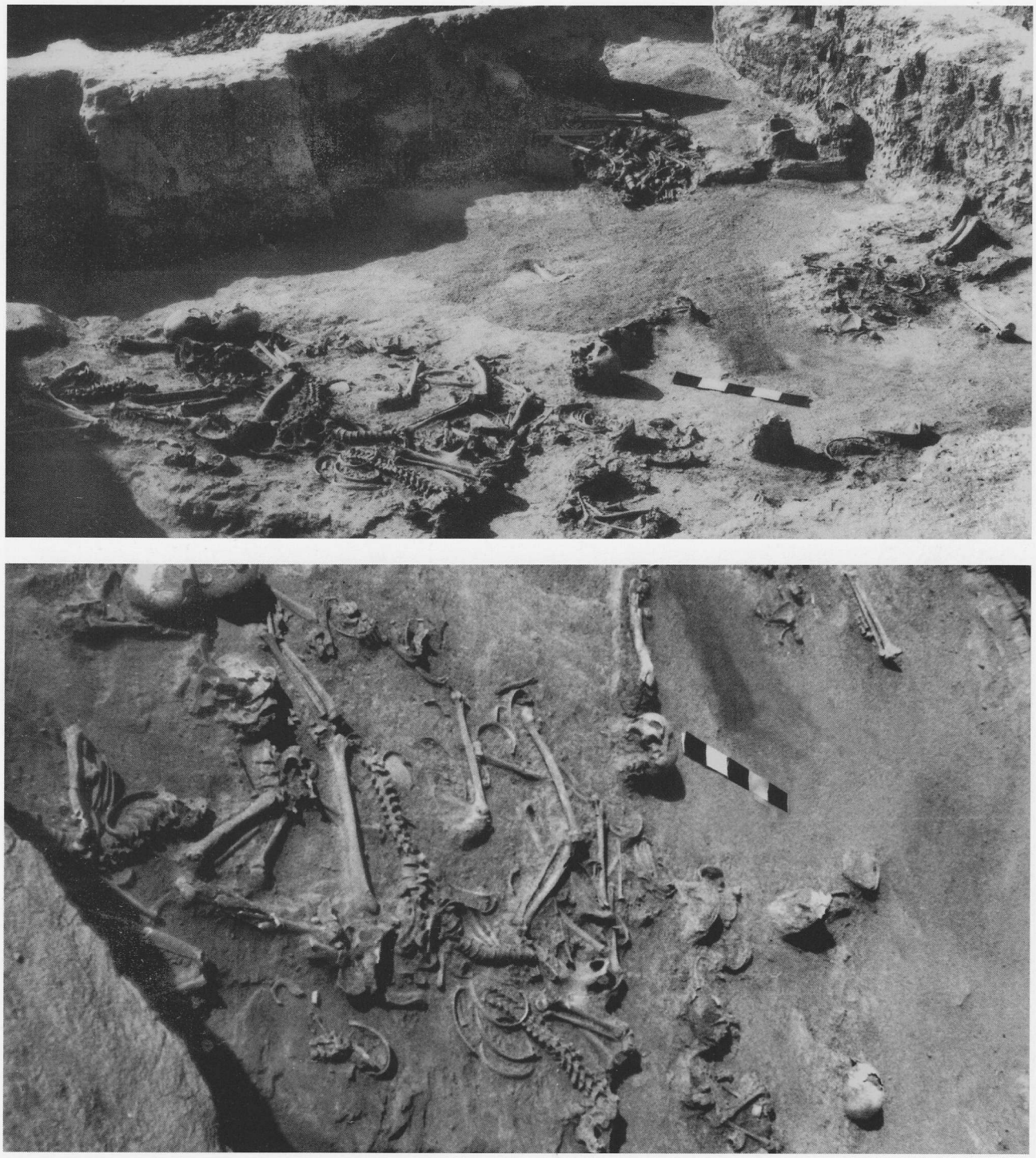


Fig. 32. Margiana. North Gonur. Chamber 92. Presumable d a k h m a.

from another one was found on the surface level, where it was thrown out by ancient robbers. It seems quite probable that such tombs might belong to people of a high rank in the Margiana society that is indirectly attested by finding of cylindrical seal of white stone with images of a seated woman with sprouts growing from her body, a horned goat and a snake (Fig. 27, No 3). It is significant that absolutely identical compositions on cylindrical seals were spread in eastern Iran including Shahdad (Amiet, 1986, fig. 132, p. 4, 6-8).

A clearly evident variety of the Margiana burial rites is especially confirmed by two typical rites: "cleaning" of burial pits by fire and cleaning of skeletal bones from soft tissue and following fractional buring.

In the second case of a great interest is a concentration of skeletons revealed in the chamber 92 of the north Gonour palace, which is dated to the period when the palace had been already left and abon-

doned. We have also to add that before the first deceased were placed into the chamber 92, the chamber's floor had been carefully cleaned and covered with the layer of black ashes, on which all ten skeletons layed, no bone bearing a trace of fire. It seems quite possible that the ashes layer was destined to protect the clear element of earth from the putrification filth. Moreover, the chamber 92 had no roof, which is an absolute proof that it couldn't be used as a burial (Fig. 32).

In the course of excavations there were unearthed ten male and female skeletons (one-of a child, others-of adults), which bones were found laying unsystematically, in the chaotic order. As a rule, all lower jaws were separated from skulls and laid behind the occupits of skulls which they belonged to (established by anthropologist B. Hemphill). This could happen only in the case of artificial separation and moving of lower jaws.

One could assume that the chamber 92 was a burial chamber used for successional burials, but if it was so the latest skeleton would have preserved the anatomic order of bones and would have been placed in the centre of the chamber. In our case two latest skeletons were found laying by the entrance to the chamber (locked with bricks), bones being mixed, one skull has a mark of probably a spear blow, a trauma caused in the man's lifetime (Fig. 32). Let us also indicate that no burial offerings, not even one personal adornment, were found in the chamber 92, this resolutely contradicting the Margiana burial practice.

All archaeological and anthropological facts and surveys just cited, give a good ground to interpret the chamber 92 as a kind of d a k h m a - a place where bones were cleaned of soft tissue, for which animals (most likely, special dogs) and birds of prey appeared to be used. After this operation bones were collected by the relations and then carefully buried in cemeteries, in burial pits, which were the so called fractional burials.

In this connection let us mention one such burial in a pythos, which contained dismembered bones of a 10-12 years old boy whose skull was accurately painted black, the operation that apparently could be made only after the skull had been cleaned of soft tissue.

Though none of the previous excavations has revealed any signs of d a k h m a still some written sources mention the practice of leaving the deceased on some special platforms.We mean the information provided by Onesikritos and transmitted by Strabo (XI, 11, 13): in Bactria before Alexander the Great there existed a tradition of leaving the dead exposed, so that dogs would eat the flesh. M. Boyce believes that this tradition had made its appearance in Central Asia from where it was adopted by Zoroaster (Boyce, 1989, p. 325). In this case Margiana is now the only place that provides us with evidence of the existence of d a k h m a and the rite of fractional burials.

So far, it is difficult to determine why the people who lived in one and the same territory had different burial rites. The determining factors could be either ethnic, or social and cultural. Nevertheless, it should be noted that in Central Asia such ceremonies were unknown and most likely they simply reflected the traditions of the newcomers. In such case we can assume that they had an ethnic rather than social reason.

Also, we must say that such soil cemeteries located next to a certain settlement are known in Bactria where there existed all three main burial ceremonies of Margiana. Quite possibly, the cemetery of Tulkhar in Tadjikistan was also the reflection of the same traditions wherein fire played a very important role.

Finally, it should be noted that cenotaphs are also found in Margiana. They look like small pits filled with vessels and in some cases it is difficult to distinguish them from a simple pile of vessels.

On the other hand, the material of the soil cemetery of Gonur is contemporary with the Gonur-1 period, a fact that undoubtedly proves that it belongs to the first immigrants who came to Margiana on the eve of the third to the second millennium B.C. Also, it may not be at all accidental that the same burial constructions are revealed at the Sumber cemetery in southwestern Turkmenistan. Among its burial offerings there are some objects similar to those from the Gonur graveyard (Khlopin, 1983, fig. 13).

Multivariant burial rituals of the Gonur cemetery is of a great interest for our subject in the light of the problem of the Zoroastrian burial rite.The burial rites of ancient Zoroastrians were characterised by strict observance of ritual cleanness, first of all, by striving to protect the "pure elements" (earth, water and fire) from defilement with corpses. For that reason the bodies of the deceased were left on specially raised places (d a k h m a) under the open sky where beasts of pray, birds and dogs cleaned the bodies from the flesh. The bones cleaned and washed by many rains could then be interred and sometimes they were placed into ceramic ossuaries.

Fig. 33, No 1. Margiana. North Gonur. Tomb of Lamb. General view.

There also existed d a k h m a s, where the installed corpses had to lie not less than a year and where the bodies were rotting and decomposing (Boyce, 1989, p. 327).

In cases when for some reasons it was impossible to install the body on d a k h m a, "temporary graves" were made. The bottom of such a grave was covered with a special flooring (for isolation of the earth from the corpse) and only then the dead body was put in it (Krjukova, 1997, p. 98). After a rather long period the corpses were excavated from such graves, laid on couches covered with lime (gypsum, alabaster) and exposed on a d a k h m a.

One can see the constant striving to protect the earth from defilement with stinking corpses, and that seems to be the essence of the burial rites of Zoroastrians from the antiquity till the present times.

A supposition was set forth that the rite of exposure of corpses had been alien to the original Zoroastrism (Dandamayev and Lukonin, 1980, p. 321), but the idea must be reconsidered in the light of burial rites of Margiana and Bactria. In Bactria we have some isolated graves with ceramic floorings on the bottom, and in Margiana there was found an obviously unusual grave which has a bottom (but not the walls) covered with a thick coat of white alabaster (Sarianidi, 1992, fig. 27). These finds show the striving to isolate the corpses from contact with earth.

In Bactria and Margiana there are several graves where only some parts of the skeletons were found. One obviously undisturbed grave at Togolok-1 is most revealing: in the corner of the floor of the grave pit there was a pile of fragments of bones of hands and feet (metatarsus). Agate beads and a lazurite amulet laid nearby, and that excludes the possibility of disturbance of the skeleton as a result of robbery. Also revealing were two skulls and long bones carefully put down together on the altar square of the temple of Togolok-21. All these remains had been put in a special pit dug after final abandonment of the temple (Sarianidi, 1990, p. 128). Such fractional interments were discovered in the burial grounds of northern Bactria, where they were considered to be interments of the dead with previous separation of flesh - an absolutely new practice of the Sapalli culture (Askarov and Shirinov, 1993, p. 126).

Much more numerous fractional interments were disclosed in the cemetery of Gonur, and thus one has

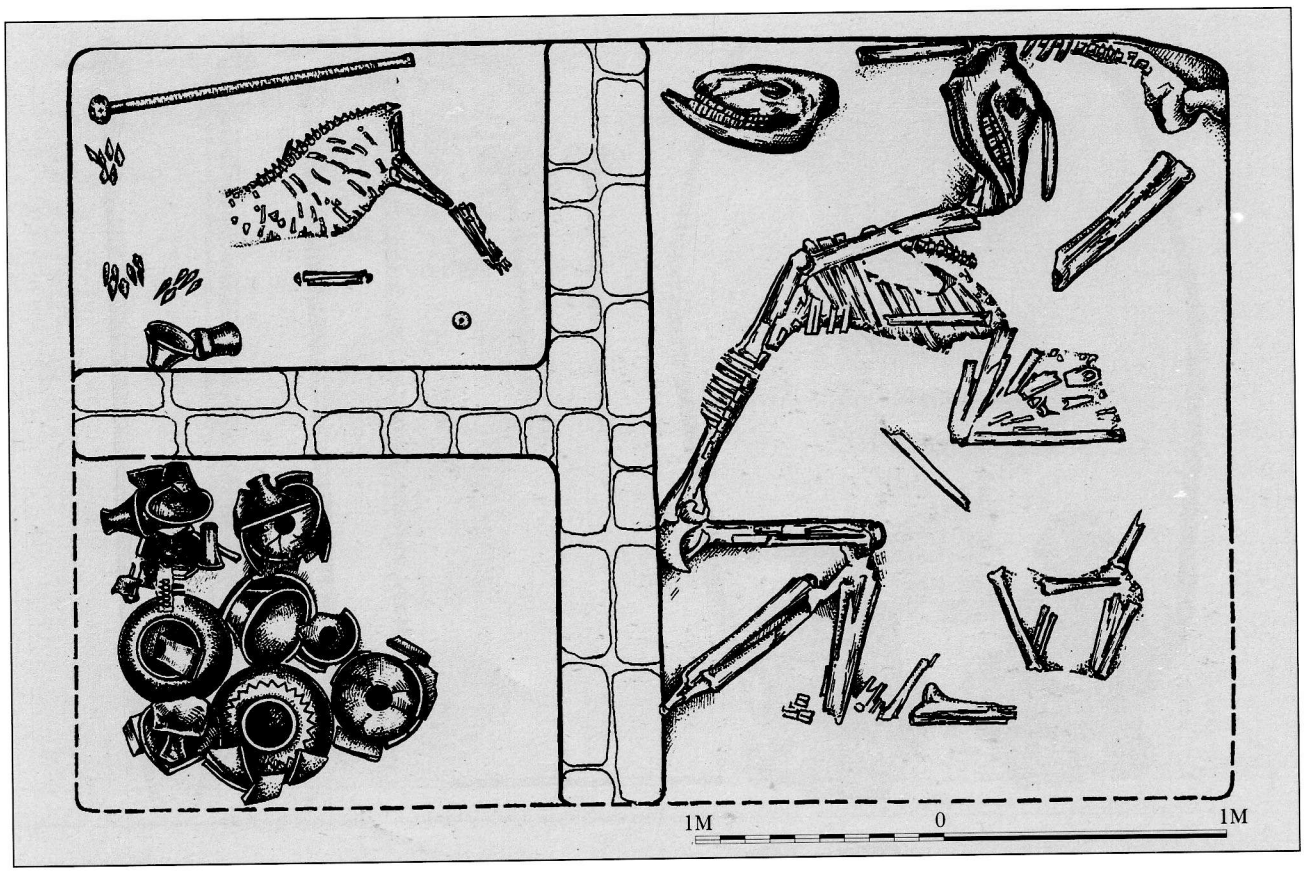


Fig. 33, No 2. Margiana. North Gonur. Plan.

good reasons to suppose that such a rite had almost a thousand years of history in Margiana. One should keep in mind that the rite of fractional interment had been unknown among the farmers of the Central Asian oases till it had first appeared in the earliest burial ground of Gonur at the turn of the III-II millennia B.C. It seems that the rite had been brought by some immigrants from their former western homeland.

In the same cemetery we found interments of separate parts of dead bodies, a fact which still needs interpretation. In this respect I can point to the Avesta, where one can find a direct order to fasten the bodies to d a k h m a by their hair and feet, for otherwise the parts of the bodies could be scattered or mixed together. Probably the presence of incomplete skeletons in the cemetery of Gonur might be explained by similar circumstances.

It would be superfluous pedantism to look for direct parallels between burial rites of Zoroastrians and those of Iranian paganism, but at the same time one cannot ignore the above-mentioned observations. One has good reasons to believe that in Margiana of the time of Iranian paganism several variants of burial rites did exist when the usual and fractional interments co-existed during the same period. The latter were also characteristic of much more recent times (Dandamayev and Lukonin, 1980, p. 322).

The excavations of the central entrance to the fortress of north Gonur have revealed a very significant burial that was conditionally called "the burial of Lamb" (Sarianidi, 1996, pp. 32-47). It became evident during the excavations that when the fortress had already been deserted, a grave pit 3.5 x 2.0 m at a depth of 1.7 m was cut through its ruins and thus destroyed the architecture of the lower layer (Fig. 33, No 1). The burial is assigned to the last centuries of the second millennium B.C. Two brick walls forming a T- shape were built inside the grave thus dividing it into three separate chambers (Fig. 33, No 2).

In the central chamber where the floor was fired and was 0.4 m higher than in the rest of the chambers there was a lamb lying on its right side. Its bones were placed in the correct anatomical order but it was missing a skull, two shoulder blades and the upper parts of the forelegs down to the knees. The bones of the hind legs are undisturbed. A small bronze knife with a wooden handle was stuck in the lamb's spinal column. Behind the lamb's backbone is a rod or a scepter made of chert with a copper and

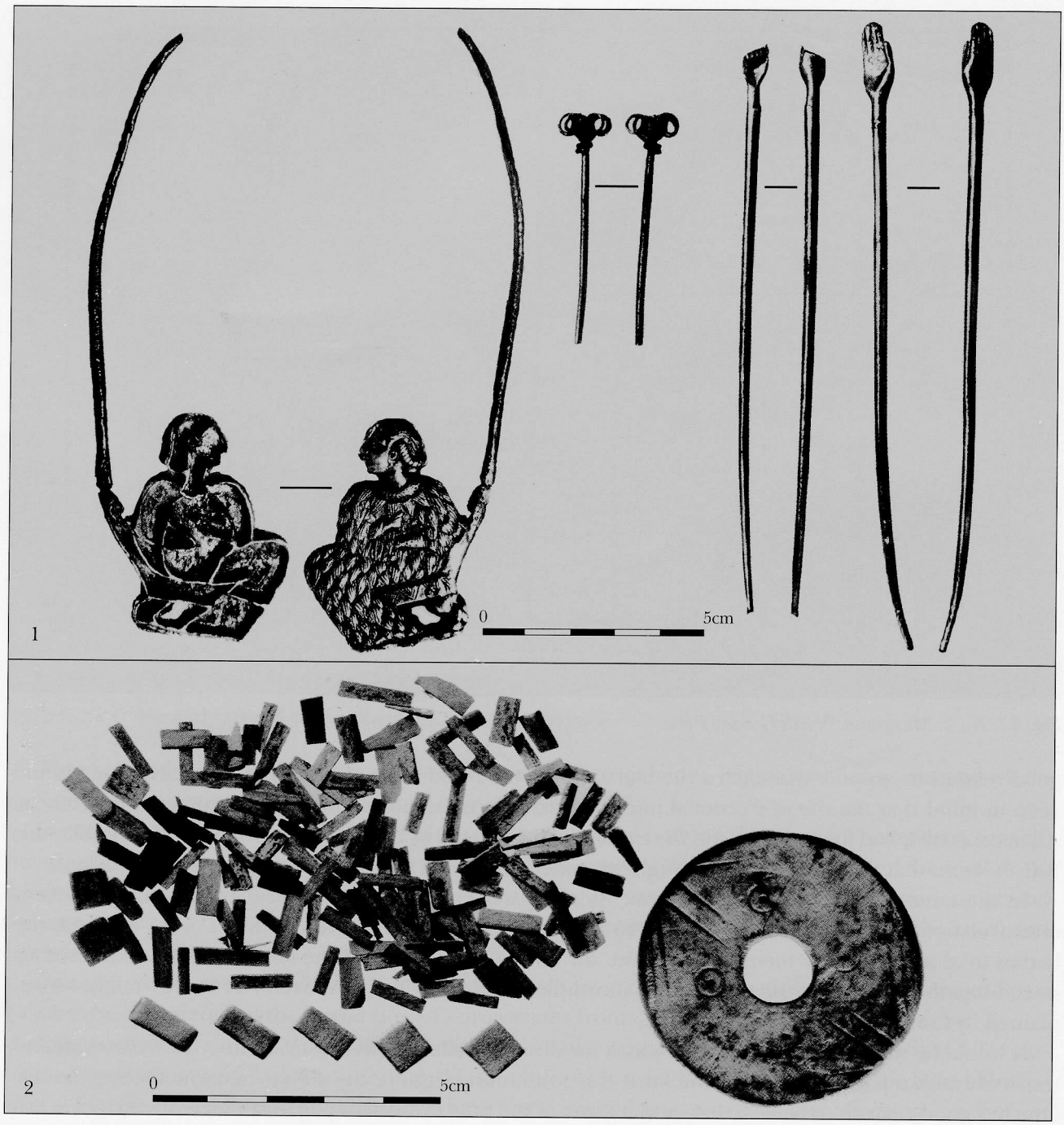


Fig. 34. Margiana. North Gonur. Tomb of Lamb. Silver pins (1), ivory circle and bone insets (2).

bronze spherical hollow top that was tightly fastened with a copper nail to this schist rod. Along the perimeter of the rod's head there are seven crosses cut and inside of it are some pebbles. On the top of the head there are four holes punched in the shape of a cross that is outlined by an "endless braid" in high relief. In front of the lamb is a "miniature column" of black steatite, and a ceramic vase covered with a thick layer of bright red color is placed above the column. Eighteen large flint arrow-heads and a great number of bone and presumably "faience" inlays were neatly scattered on the floor. Near the lamb's hind legs is an ornamental ivory disc. It can be assumed that the inlays together with the ivory disc once decorated a wooden box that was not preserved (Fig. 34, No 2).

In the second chamber there were found about 20 complete vessels and a backbone of a ram or a goat among them. In the third chamber two intact camels (though very badly preserved) were found in the correct anatomical order and between them two almost decomposed skeletons of rams or goats. Possibly

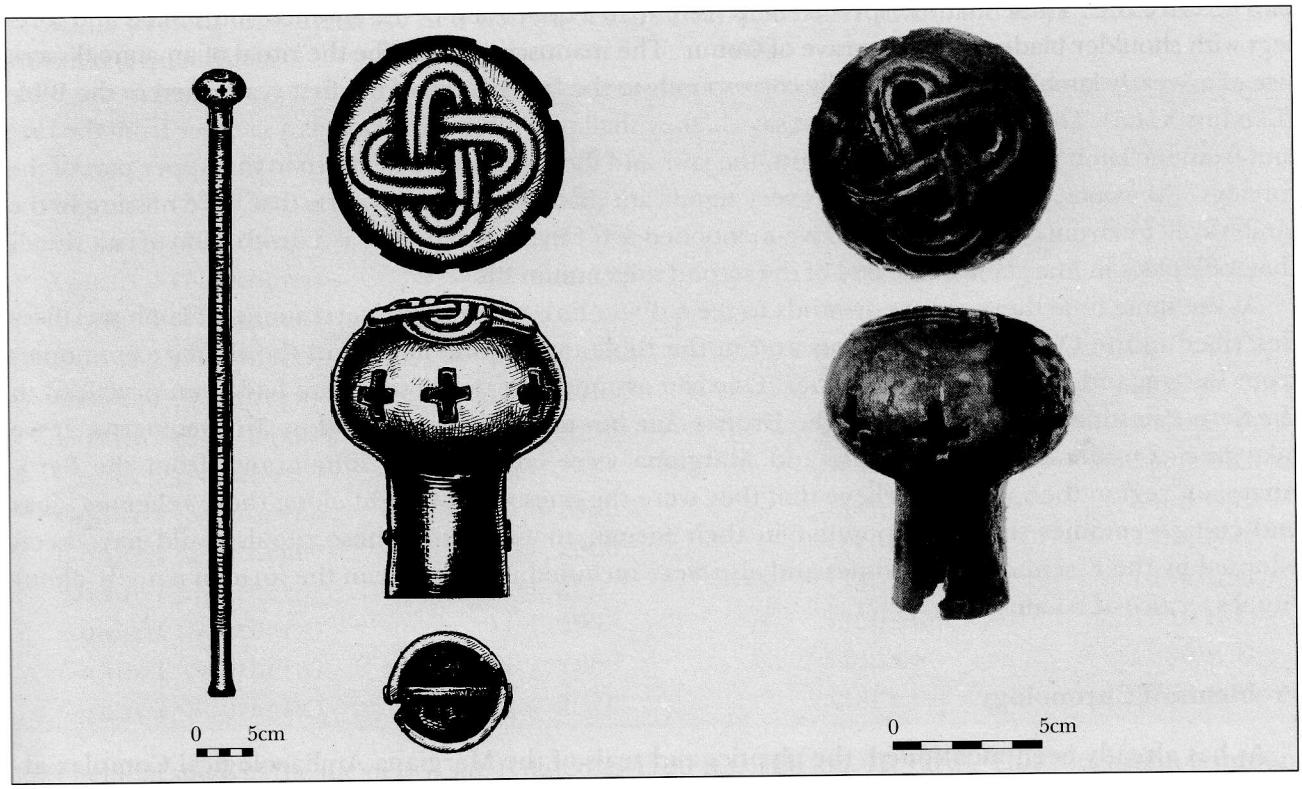


Fig. 35. Margiana. North Gonur. Tomb of Lamb. Scepter with a macehead.

to this tomb belongs the find of four silver pins, two of them with heads in the shape of a clenched fist and an open palm. The third pin's head was made in the form of loosely hung rings while the fourth one represented an enthroned lady in rich dresses of the Sumerian "kaunakes" type (Fig. 34, No 1).

A schist rod or scepter of over 1 m long (Fig. 35) stands out among these funeral offerings. The main deities on the stone reliefs of Yazilikaya held such large rods in their hands(Garstang, 1929, tabl. XXIV). The top of the rod's head from Gonur was decorated with a "braid" that had no beginning nor end and we should note here that this design was a characteristic symbol of the Syro-Hittite seals. Such ceremonial scepters, though of a smaller size were found in Cyprus, Phoenicia and Palestine but two bronze scepters from the priest's grave in the East Mediterranean are especially representative (Avidal, 1994, p. 135). The ivory disk finds its closest analogies in Asia Minor (Alishar, Sultan Tepe, Kul Tepe) and the similar find from the nearest place was excavated in Tepe Gayan in Iran (Herzfeld, 1941, p. 40, fig. 254).

The lamb's burial in north Gonur cannot be considered a unique one since a similar burial was found also in Margiana (Sarianidi, 1990, tabl. 55) and in Bactria in the south (Sarianidi, 1977, fig. 24), as well as in the north (Askarov, Abdullaev, 1983, p. 48). It should be noted that in all these cases they are buried according to the rites of human interments, that is on the right side and with the head mainly oriented to the north. One can say that a human body was replaced by an animal skeleton or in other words we can speak about the replacement of a human's sacrifice by that of an animal. Having in mind the cult character of the funeral offerings ("miniature columns", a rod or a scepter) we can assume that such substitutions concerned religious rather than secular persons.

The substitution of human sacrifice by animal sacrifice took place in ancient history. As is known for example, when King Agamemnon had to sacrifice his daughter Iphigenia, the Gods at the very last moment replaced her by a doe. In the Bible also one can find a similar subject when Abraham had to sacrifice his son Isaac who was then substituted by a ram (Genesis, 22:1-14).

The miniature knife that was stuck and left in the spinal column of the lamb from the Gonur burial clearly indicates that the lamb was sacrificed. On the other hand, it is useful to refer to the Qumran scrolls that were found near the Dead Sea and belonged to the proto-Christian communities of Essenes in the sec-

ond century B.C. These manuscripts can help us find an explanation of the absence of the skull and forelegs with shoulder blades from the grave of Gonur. The manuscripts describe the ritual of an animal sacrifice of a "yearly lamb", an idea that fully corresponds to the "male lamb of the first year" used in the Bible (Exodus, XII:5). The same Qumran texts say: "...they shall pick out for the God as a sacrifice from the ram and from the lamb the right leg, the breasts, the jaws and the shoulder blade down to the upper part of the forelegs" (Martines, 1994, Col. XX). It is very significant that these were the parts that were missing in the lamb's skeleton from Gonur and the above-mentioned text can be interpreted as a description of cult rituals that took place in Margiana at the end of the second millennium B.C.

At the same time there are no grounds to see a direct link between the ceremonies of lamb sacrifices described in the Qumran manuscripts and in the Bible on the one hand and the similar ceremonies from Bactria and Margiana on the other. One can assume that this kind of rite had been practiced in the Syro-Palestine region already in the Bronze Age but are so far not found by archaeologists. If we take into consideration that Bactria and Margiana were colonized by immigrants from the Syro-Anatolian region then we may believe that they were the ones who brought along those religious ideas and cult ceremonies that were popular in their former motherland. These rituals could have been adopted by the Essenian communities and also were included in the Bible in the form of a myth about ritual sacrifice of a Lamb.

Problems of Chronology

As has already been mentioned, the glyptics and seals of the Margiana Archaeological Complex allow us to attribute it to the period of Namazga VI in south Turkmenistan, that until recently was dated to the middle or the second half of the second millennium B.C. At present, due to the series of radiocarbon data, there is a tendency to refer the Bronze Age of Turkmenistan to the still more ancient period, which means that the previous period of Namazga V is placed within the limits of 2300-1850 B.C. Having in mind the fact that between the periods of Namazga V and VI there was no interruption, then the beginning of the Namazga VI complex should be assigned to two to three centuries earlier. But according to another view point, the beginning of Namazga VI is dated to 1400-1300 years B.C. At the same time the upper layer of Altyn Depe yields isolated but still very representative examples of such objects as a "schist rod" and a "miniature column" that were very widespread in Bactria and Margiana. In other words there is a basis for the link between the period of Late Namazga V and the complex of Early Namazga VI, in which case the upper layer of Altyn Depe belonged to the beginning of the Namazga VI period, a fact that has already been stated in literature. At the initial stage of the exploration of Margiana, it was believed to have the closest links with the Namazga VI period that was unanimously (including the author of this work) placed in the middle and the second half of the second millennium B.C.

The recent archaeological material allows us to define more precisely the chronology of the Bronze Age of Margiana. Unfortunately, in Margiana we could not find any authentic objects imported from such advanced centers of the ancient world as Iran and Mesopotamia, for example. Possibly the only exception is a fragment of the composite statuette from Gonur I. It reveals clear similarity with the corresponding images from Elam, that according to the inscriptions made on them are dated to the middle of the nineteenth century B.C. Thus, contrary to the previous assumptions, the whole series relates to the first centuries of the second millennium B.C. rather than to the third millennium B.C.

Moreover, at present we may consider it proved that the decorated stone objects including the biconical steatite beads with circular designs should be dated to the beginning of the second millennium B.C. rather than to the third millennium B.C. As we discuss the chronology of Margiana and Bactria it will become clear that the Bactria and Margiana Archaeological Complex (BMAC) has prevailing parallels with the Hissar III complex. These parallels are so close that one can say that the Hissar III complex has better and deeper links with BMAC than with the next layer at the same site: the Hissar II complex.

At the present time there are new dates from the Beta-laboratory (USA) and from the laboratory of Helsinki (Finland):

Gonur I			
Gonur I (Palace)	Beta 33563	3630±60	1790 B.C.
Gonur I (Northern)	Beta 33560	3600±60	1760 B.C.
Gonur I (Northern)	Beta 33561	3440±60	1595 B.C.
Gonur I (Northern)	Beta 35125	3520±60	1675 B.C.
Gonur I (Northern)	Beta 33559	3310±80	1460 B.C.
Gonur I (Northern)	Beta 33558	4360±60	2540 B.C.
Gonur I (Southern)	Beta 33562	3730±60	1890 B.C.
Gonur I (Southern)	Hel. 2963	3540±90	1590 B.C.
Gonur I (Northern)	Hel. 2964	3750±80	1800 B.C.
Gonur I (Southern)	Hel. 2965	3550±80	1600 B.C.
Gonur I (Southern)	Hel. 2966	3410±80	1460 B.C.
Gonur I (Southern)	Hel. 2967	3380±110	1430 B.C.
Gonur I (Southern)	Hel. 2968	3600±80	1650 B.C.
Gonur I (Southern)	Hel. 2969	3480±80	1530 B.C.
Gonur I (Southern)	Hel. 2970	3380±90	1430 B.C.

The final stage in the life of this site is dated to 1700 B.C. (Dyson, Hovard). This conclusion is important for our subject and differs very little from the chronological limits suggested by E.Schmidt half a century ago. It is possibly not relevant to speak about the Hissar IIA and Hissar IIIA subperiods but one cannot deny the existence of a special Hissar III complex that, possibly due to external influence, differs from the previous Hissar II complex.

There exist different points of view in characterizing the Hissar III period. For example, the supporters of the long chronology based on the find of cylinder seals ascribed it completely to the third millennium B.C. But the excavations of the BMAC have documented that in Bactria and Margiana cylinder seals were manufactured during the whole of the second millennium B.C. and up to the beginning of the first millennium B.C.

The head of the excavations, E.Schmidt, had ascribed the Hissar III period to 2000-1500 years B.C. The radiocarbon data that were received during the excavation probes gave the more precise chronological frames, that is 2150-1885 years B.C. and 1940-1705 years B.C. (Dyson). So in spite of the reliance on the MASCA corrections one can say that in general the existence of Hissar III is dated to the beginning of the second millennium B.C.

Over ten years ago, the market of antiquities in Kabul was overloaded with different pieces from the plundered tombs of Bactria. One could find there objects that reflected the influence of the Elam and Mesopotamian traditions. This gave an impression of a deep archaism of the Bactrian antiquities. But even the parallels between Elam and Mesopotamia on the one hand and the BMAC on the other, can indicate that these pieces should be ascribed to the period of Ur III (2140-2000 years B.C.) and the beginning of Isin-Larsa, but in no way earlier than that. Based on this and on some other data P.Amiet was the first to assign the Bactrian antiquities to approximately 2250-1800 years B.C., a conclusion that still needs additional proof. Indeed, it should be noted that instead of relying on the mass of commonly found material for determining chronology, a long standing practice of the scientific community, scientists often rely on objects of a special or prestigious purpose for reaching their conclusions. Besides, as is well known, for the sake of receiving more precise comparisons one should use the later dates rather than the earliest, thus minimizing the element of coincidence.

At present, besides Hissar there exists another east Iranian site, Tepe Yahya, where many stratigraphical layers were excavated (Lamberg-Karlovsky, 1970). Already the first responses to the results of these excavations contained a warning against an attempt to consider this site as too ancient. Later the head of excavations has taken this warning into consideration. The dating of the Yahya IV site is a subject of special interest for

our work. K. K. Lamberg-Karlovsky, impressed by the excavated proto-Elamite tablets, has ascribed not only the sub-period of Yahya IVA but the whole complex of Yahya V to an earlier age than it should be ascribed to, the end of the complex being dated to 2800 B.C. But it has been demonstrated that the tablets belong to a much later period (Waiman, 1972). Besides the finds in the layer of the Yahya VA period there were found isolated examples of painted fragments in the shape of friezes along the vessel's rim with bands that descend to the bottom in the manner of broken "tendrils". These were the typical designs of the Namazga IV ceramics that are dated not later than the third millennium B.C. All these data made K.K.Lamberg-Karlovsky review his ideas on the chronology of the Yahya IV layer and now it is set forth in the following way: IVC —from 3400 to 3000 B.C.; IVB —from 3000 to 2500 B.C.; IVA— from 2200 to 1800 B.C.

It is possible that in future we should again review the chronological data of Yahya IV in the direction of making it "younger" since in the IVB layer there were found objects made of iron as well as vases that had shapes characteristic for Bactria and Margiana. Some cases of correspondence between Yahya IV and BMAC have already been mentioned in the literature, but it concerns mainly their relative synchronization, leaving the problem of absolute dates open. Nevertheless, it seems most possible that like BMAC the sub-period Yahya IVA as a whole belonged to the beginning of the second millennium B.C., a conclusion that is fully supported by the whole sum of the available material. The radiocarbon dates from Gonur Depe seem also to support the idea of this chronology if one disregards the MASCA-corrections that are absolutely unacceptable for the archaeology of Turkmenistan.

During the excavations in Margiana an iron bead was found in the temple of Togolok-21, and a fragment of an iron knife or a dagger —in the cultural level of temenos of Gonur. Special laboratory analyses show that it was really artificially produced (not meteoritic) iron, which, according to the written sources and archaeological data, had appeared in the ancient Near East not prior to the middle of the second millennium B.C. One can hardly imagine that Margiana, devoid of local iron-ore deposits and remote from them, could produce iron earlier than other countries of the Near East. J. Shaffer contends that India had its own center of iron metallurgy, but we do not know, whether it was meteoritic or smelted iron, which is of crucial importance. A series of radiocarbon dates (non-calibrated) also set within the limits of the second millennium B.C. The whole complex of the data at our disposal indicates that the first colonists from the west appeared in Bactria and Margiana at the transition of the III-II millennia B.C., the south Turkmenian tribes could colonize Margiana not long before that.

Summing up the review of the chronological limits of the Margiana archaeological complex it seems most plausible to ascribe its origin to the eve of the third-second millennium B.C. The following dates for Margiana can be preliminarily suggested: Kelleli period (2000-1500 years B.C.), Gonur period (1500-1250 B.C.), and Togolok period (1250-1000 B.C.). The Takhirbai period possibly corresponds to 1000-750 B.C. It seems likely that the ancient farming culture appeared in Bactria on the eve of the third-second millennium B.C., which practically coincides with the period of the origin of the BMAC. In this connection it is possibly not at all accidental that the above-mentioned decline of Tepe Hissar, Tepe Yahya, Shahri Sokhta and perhaps, of Shahdad coincided with the period of the settling of tribes of the BMAC. The impression is being created that there existed some connection between these two events, though poorly supported by the available archaeological material.

To conclude the general survey of the Margiana culture let us mention that the economy of the local tribes based on the agriculture with the auxiliary role of hunting and fishing. Besides wheat and barley, people cultivated lental, plum-trees, apricot-trees and vine. Besides the cattle and small cattle, were also wide spread pigs, camels and donkeys, the latter, according to R. Medow, were used as draught animals.

People hunted antelops, wild boars and waterfowl. Bones of a quite big duck was detected in north Gonur. Though fish bones have not been found, bronze fish-hooks are good evidence of fishing.

The arable lands could be cultivated by wooden ploughs and massive bronze hoes. To make articles of wood, bronze chisels and gouges were used.

Cloth impressions on bottoms of some vessels attested the practice of plaiting by bone and bronze needles.

Footwear was leather type of sandals with straps passed between feet fingers and tied up high on calves.

Various stone articles are evidence of distant expeditions to the foothills of Kopet Dagh from where different kinds of stone were brought to Margiana.

Palaces and Temples of Margiana

CHARTER III

Civil Architecture

We shall start our review with the completely excavated settlement of Kelleli-3 since it is an example of civil architecture. The majority of sites in Margiana look like low, unfortified settlements that so far have been poorly studied by archaeologists. Nevertheless, there exist occasional examples of fortresses, Kelleli-4 being one of them. It appears to be a square of 30 by 30 m and is believed to represent the remains of a multi-roomed house used by a large family community. Like all the other architectural structures of Margiana, this fortress was built of sun-dried bricks, the masonry made with clay bonding and then plastered with clay (Fig.36,No2).

The defensive wall of the Kelleli-3 fortress has rectangular towers in the middle of each of three sides and on its fourth side there are two gate towers. Ordinary dwelling houses with household buildings are densely grouped together in the center of the walled area. Such density seems to be explained by the growth of population inside the fortress when the grown-up children made up their own families and built new houses. Outside, the fortress is encircled by some other buildings that are not yet excavated, thus preventing us from forming a general impression of the site.

Likewise, it should be noted that like the monumental building of Kelleli-4 this fortress is also encir-

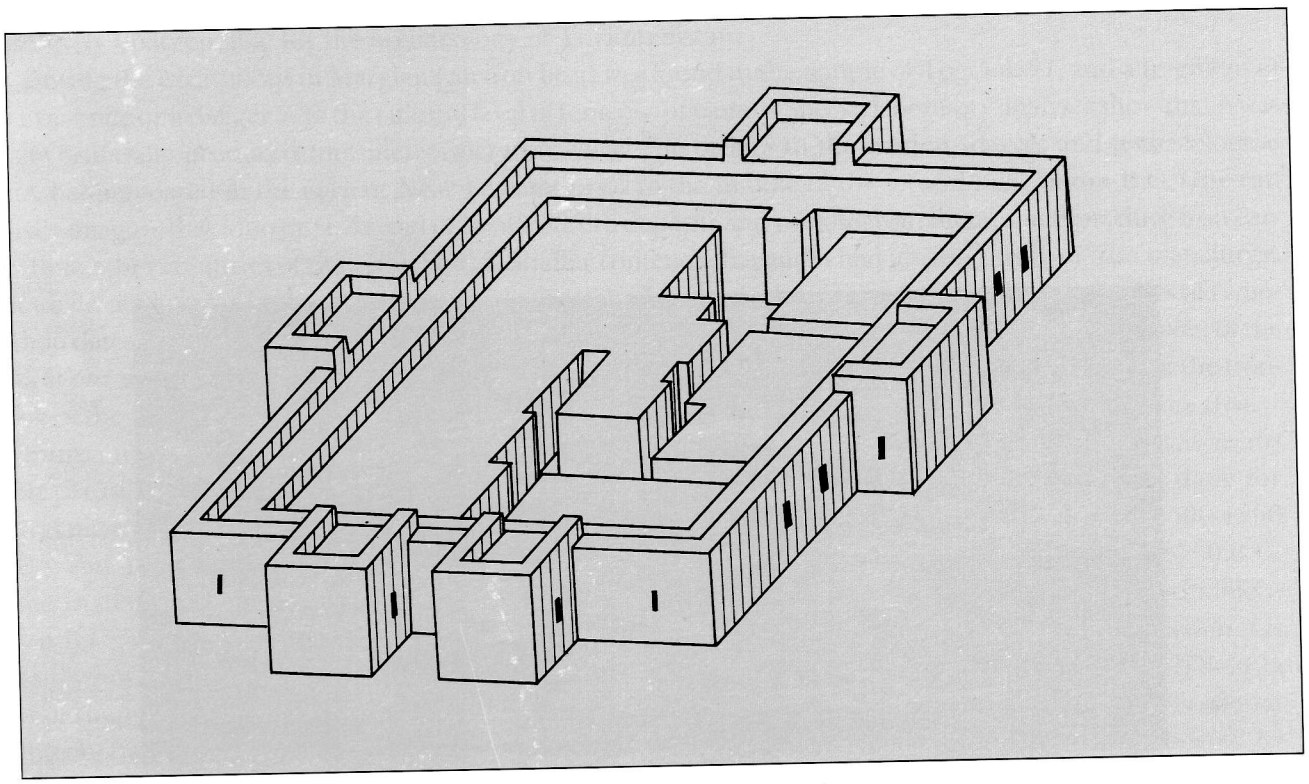


Fig. 36, No 1. Margiana. Settlement of Kelleli-3. Axonometry by M. Mamedov.

cled by a surrounding corridor with rectangular towers along the perimeter of the outer walls and closer placed towers at the entrance to the fortress. This shows the existence of architectural traditions among the very first colonists of Margiana. As a whole, these architectural traditions have no local roots, while clearly recalling the traditions of ancient Bactrian architecture (Sarianidi, 1986).

The excavations of the Margiana temples show that after their decline common tribe members used these ruins, building new private dwellings on top of them.

Thus ,after the Togolok-21 temple ended its operations they began to build domestic areas of "private houses" and household buildings around the central fortress. The eastern section of the temple with three main microcomplexes gives the best representative picture (Sarianidi, 1990, p. 135–137). Unfortunately ,out of three complexes only one remained intact, its layout allowing us to reconstruct the general plan of the rest. Each microcomplex had an inner courtyard filled with dwellings and household build-

ings that apparently belonged to large separate families. It seems that the basis of ancient Margiana society consisted of such large family cells.

The same picture is true for the Togolok-1 temple where after the end of the temple's operations, houses and household buildings with hearths for everyday use were built in the open southern section. But the poor preservation of the site prevents us from reconstructing the general layout.

Besides the temple in the Gonur temenos, there was excavated a clearly civil architecture that was also characterized by a dense concentration of dwellings and household structures grouped around the open courtyards. The houses are carelessly built, their leaning walls were one brick thick, in many houses there were heating hearths, while hearths for cooking were in the household buildings. Such chaotic and dense building is most probably explained by the limited area of the temenos where in the case of necessity new houses had to be built within the rigid framework of the temenos.

In any case, there are sound grounds to assume that in the Bronze Age the basis of Margiana society consisted of large family communities of blood relatives that tried by all means to live next to each other rather than to separate. Although the majority of the usual settlements were not fortified, there already appeared rare cases of strong fortresses used by rich families or even family communities of blood relatives that lived separate from the whole tribe.

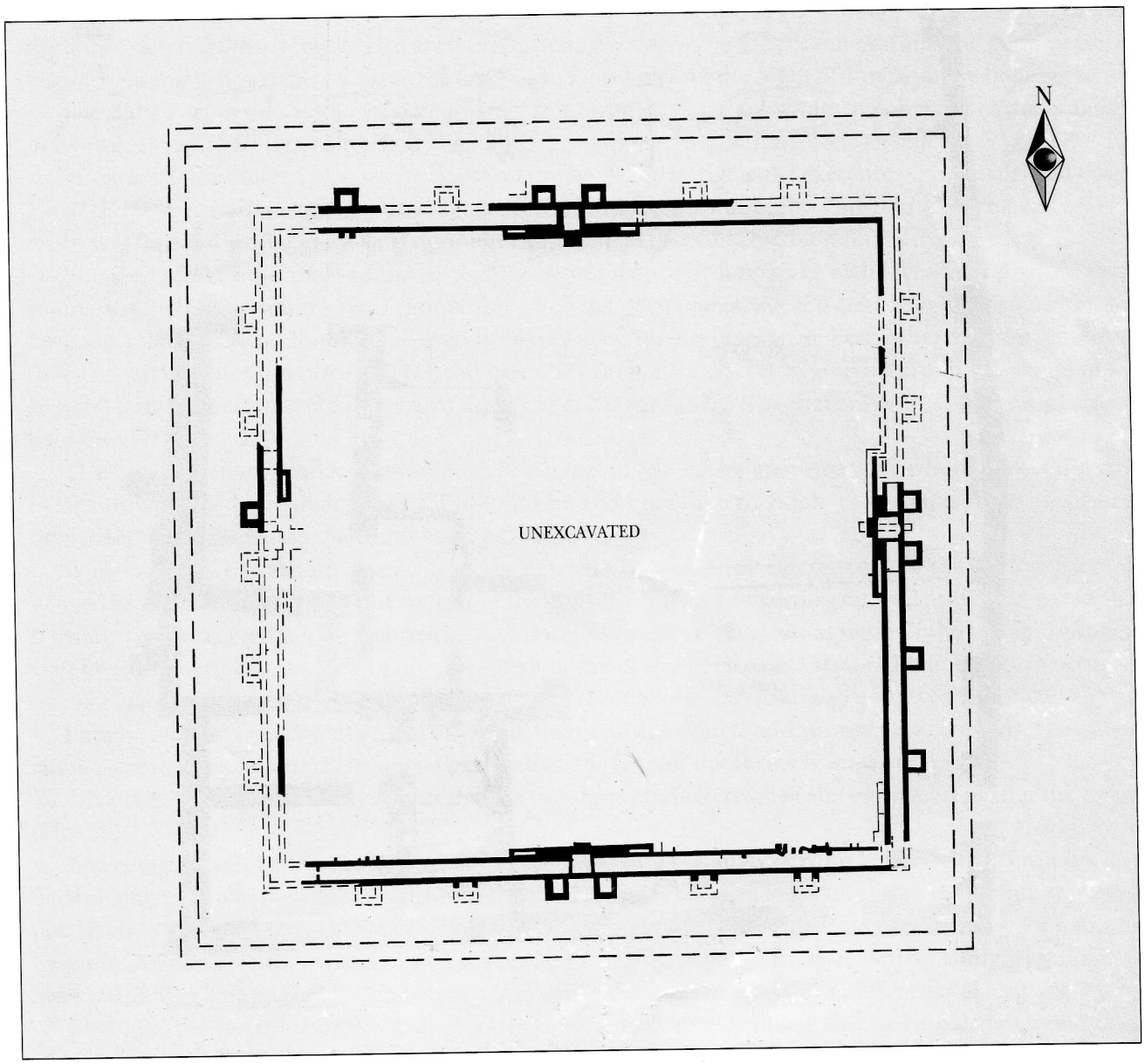


Fig. 36, No 2. Margiana. Settlement of Kelleli-4.

Secular Monumental Architecture

Among the known monumental structures of Margiana the earliest one is Kelleli-4 which appears to be a square of 125 m by 125 m with the walls strictly oriented by the four cardinal points (Fig. 36, No 2). Unfortunately ,the work on the site was limited to the surveys and its central section was not excavated. Nevertheless, it was revealed that the outer facade of the building was encircled by two parallel walls that formed a sort of surrounding corridor. On the perimeter of each of its sides there are six rectangular towers without any visible entrance into the corridor. In the middle of each of the four sides there is an entrance flanked by a pair of towers. From the inside of the complex each entrance has a pair of long rooms of an unclear purpose. Though the excavations of this monument are far from being finished, there are sound reasons to assume that this was a monumental structure of a secular or cult character that served the needs of the whole Kelleli oasis (Masimov, 1986, fig. 2). In the center of Adji Kui-8 was a partly excavated building , supposedly a residence of a local ruler (Fig. 37).

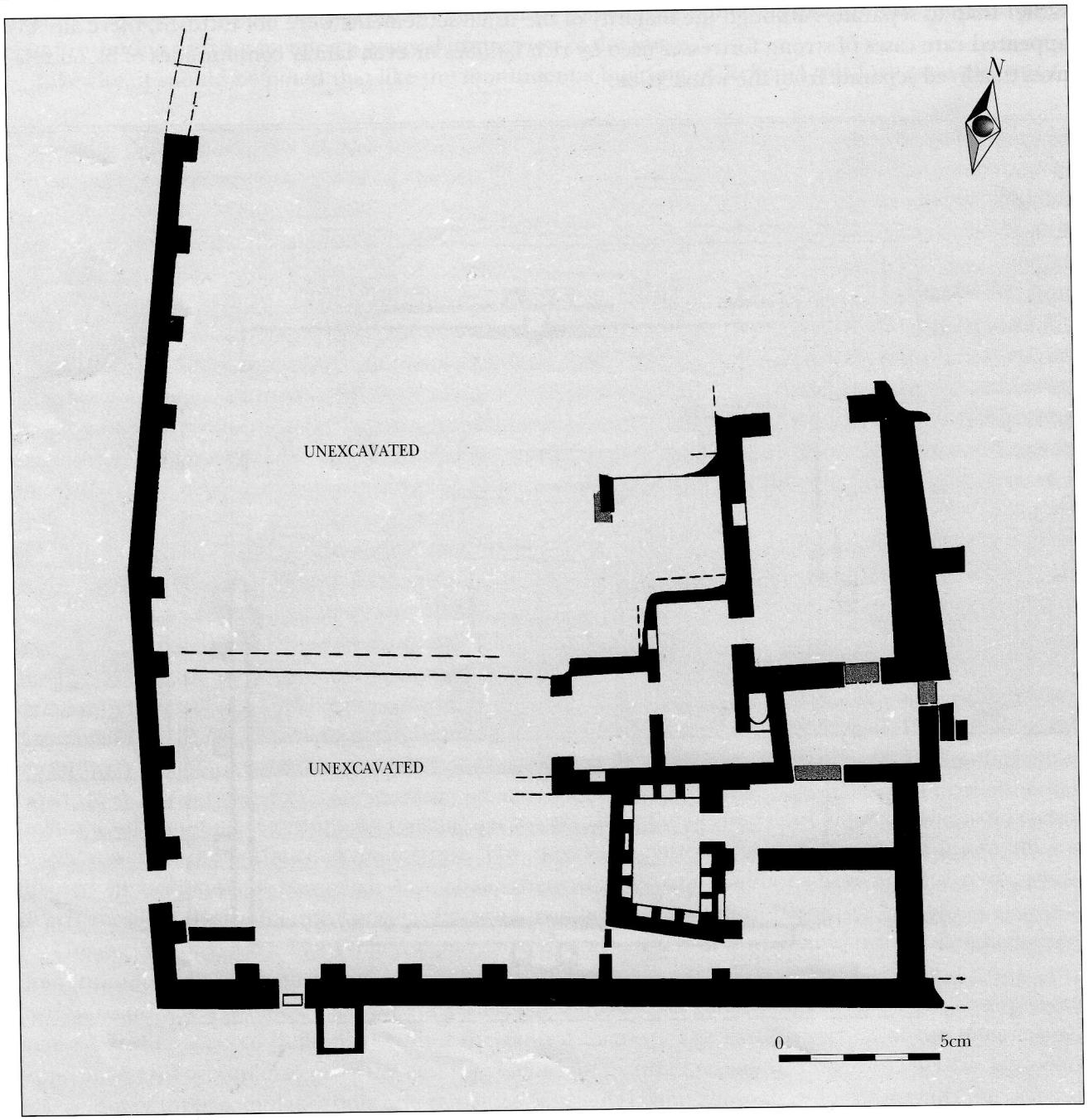


Fig. 37. Margiana. Settlement of Adji Kui. Plan of the excavated area.

But on the other hand, the real ***palace*** which is inferior to similar Mesopotamia monumental structures neither in dimensions, nor in plan, is located in the center of north Gonur; the great scale excavations of it are still in progress.

Excavations have revealed that the monumental structure examined was built by the first settlers of the Murgab delta. As a construction site they had choose a natural hill, on which top was built a kind of a citadel consisting of the palace and structures beyond palace eastern wall but inside the citadel, which destination still remains unclear.

The ancient settlement of Gonur undoubtedly served as a political capital of Margush and consisted of two sections: northern and southern Gonur.The northern Gonur was built first and it was a settlement with a centrally located citadel with strong by-pass walls. Private houses of ordinary inhabitants were located around the citadel but nowhere had any direct contact with it.When the northern Gonur has enlarged its area it was decided at the distance of 250 m to the south of it to build the so-called "sacred area" or the above described temenos

The rectangular citadel of 150m by 140 m has preserved the outer defensive walls in the form of a by-pass gallery with corner towers and additional towers along the outer walls. In the middle of each of three defensive walls there is an entrance flanked by drawn together towers that add to the defensivness of the citadel. On the fourth eastern wall there was no such an entrance since from the very beginning it was planned to build the above described fire temple.The northern entrance seems to be the central one and the good preservation of walls made it possible to locate the arrow-like loop-holes on the hight of 1 m from the floor surface.

The most part of the citadel was occupied by a monumental palace while the purpose of the buildings in its eastern section remains unclear (Fig. 38).

There are at least three successive periods that can be clearly traced in the existence of the citadel and palace.

In the first period a citadel with a palace located inside of it was built. This period in the citadel existence was finished with a great conflagration caused most probably by the military invasion.

The second period is marked by the great scale of reconstruction works with the aim to provide maximum solidity for the citadel fortification walls. For this purpose inside the citadel by-pass corridors rectangular pillars were built on the pressed fire layer at equal distances from each other.For the maximum defence capability of the northern central gate they built a special by-gate structure in the shape of two parallel walls that at a certain point turn at a right corner in such a way that only a very narrow passage is left between these walls.

Thus, the putative invaders should have first to get inside the by-gate structure where they could have been easily reached by the defenders of the citadel and only then through an extremely narrow passage they could have got inside the citadel and palace.

Walls of many rooms and especially of the ceremonial ones were reconstructed, that is documentally proved by new plaster layers put on top of the walls with traces of conflagration.Inside, the palace was partially reconstructed and replanned, an evidence of the unceasing functioning of the whole complex.

The third period is marked by the complete decay of the palace, its former chambers were occupied by poor people who built common dwellings, household sheds and in some cases even kilns.

Finally, after these last inhabitants in their turn left the citadel and moved to new lands, the citadel ruins were used as cemetery, its burial pits cutting the tops of the formers walls.

After these preliminary notes let us discuss the short characteristic of the excavated part of the palace (Fig. 38).

The central part of the palace, its kernel, is occupied by a rectangular complex of clearly ceremonial,official chambers (an audience-hall,a throne chamber, king's residence) located right in the center of the citadel. In the west and in the south this central sector is separated from adjoining structures by long narrow by-pass corridors, from the eastern side -by a wall (probably, facial) with several protruding pyramidal pilasters and with a passage through which one could get into other chambers of the citadel (Fig. 39, No 1).

Through the north central entrance gates one came first to the vast and open palace square, from where he entered through a kind of a portico with two passages to an audience-hall consisting of two chambers (194 and 188). It seems rather possible that room 194 served as a kind of a waiting room for

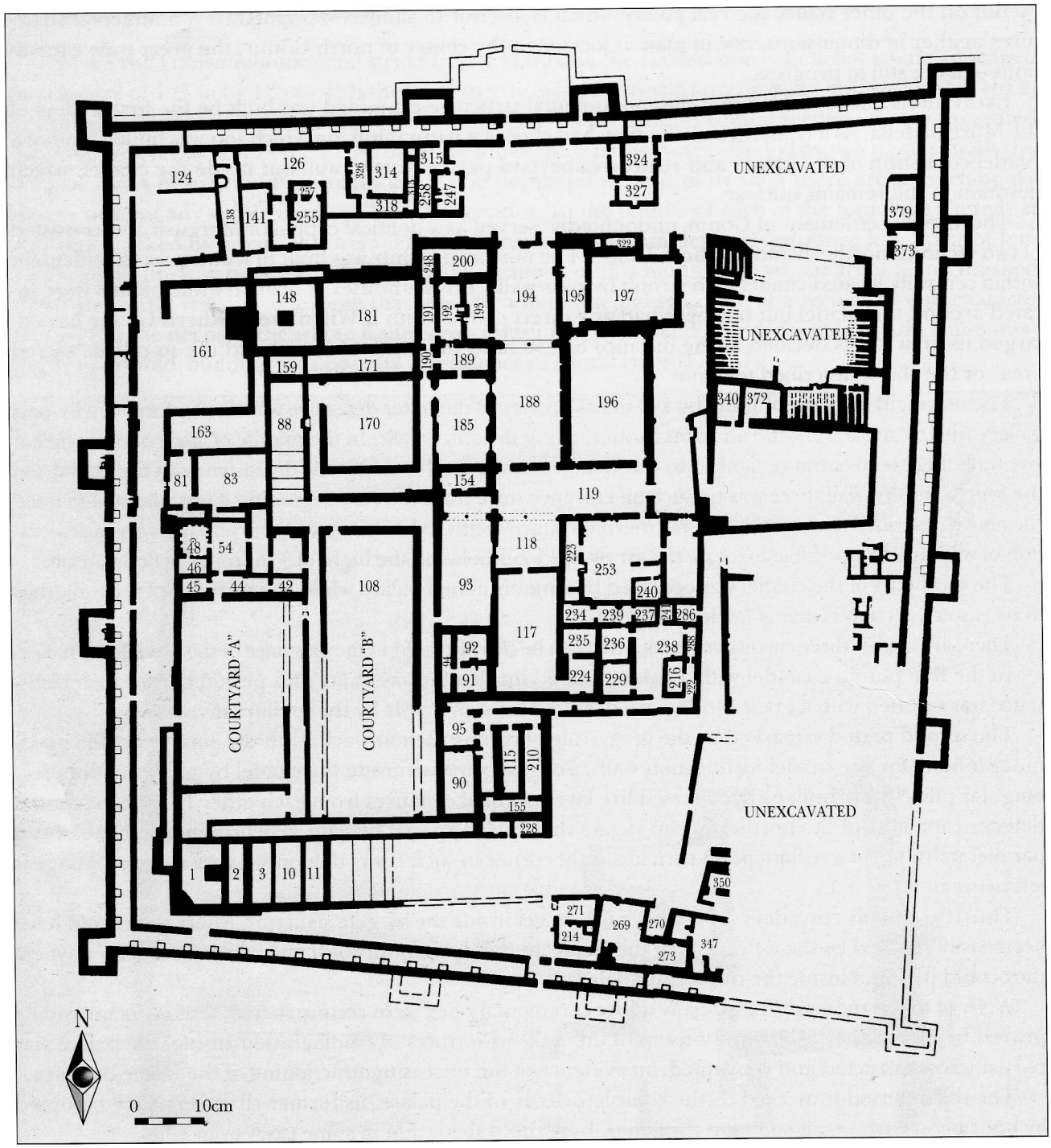


Fig. 38. Margiana. North Gonur. Palace. Excavated area.

those who wanted to get into room 188 where the actual reception took place. The audience-hall floors have preserved many layers of gypsum daub, its walls are whitewashed.

The eastern wall of the chamber 188 has preserved four accurate niches carefully plastered, opposite which blind windows were made of the same type as the ones in the above described fire temple.(Fig. 39, No. 2).

It is quite logical to assume the presence of columns in the suggested audience-hall with the general area of over 300 square m. They would have been needed for the roof to rest on them since it was necessary to protect the delicate layers of plaster on the floor and walls from the rains.But traces of such columns were not excavated and thus one can suggest that they were wooden and either stood right on the floor or rested on stone bases that were also not found. The absence of stone bases can be explained by the fact that in the third period the palace was occupied by ordinary inhabitants who could use them for their various

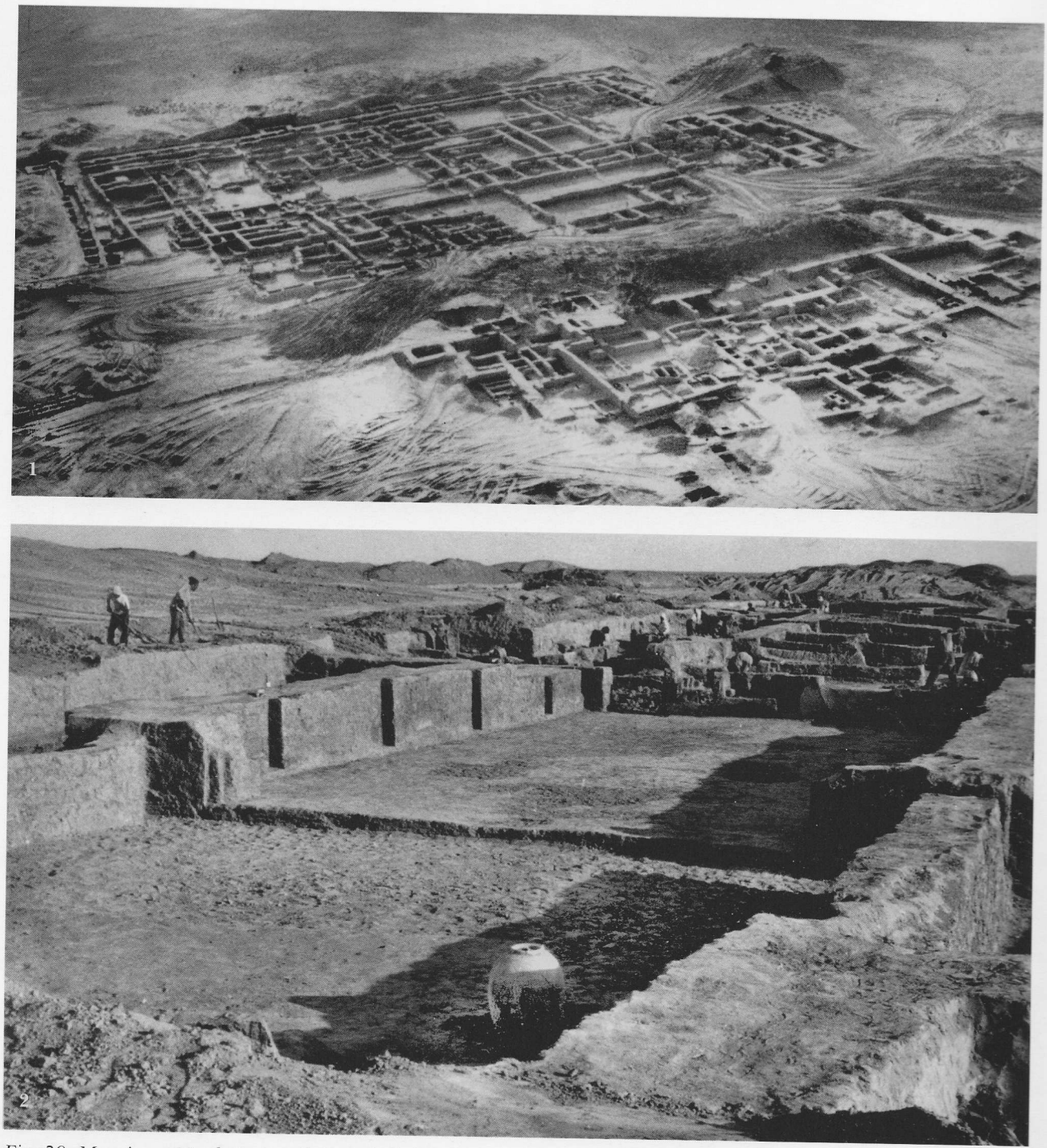


Fig. 39. Margiana. North Gonur. Palace. Aerial view (1). Audience-hall with threshold between rooms 194 and 188 (2).

constructional needs especially if one thinks that there was a shortage of building material in Margiana.

One cannot but note the extremely wide passage between two chambers 194 and 188 which is formed by two figured pillars facing each other.In this passage has survived a low square threshold, in the center of which a wooden pillar was initially installed.This pillar rested on the stone disk of about half a meter in diameter(Fig. 19, No. 10) and was firmly fixed by small ceramic crumb.

Such extremely wide passages with low thresholds and columns dug into them and rested on the basalt bases are found in the palaces of Syria (Ras-Shamra, Alallakh), where they could be used as a support for two-folded doors (Woolley, 1955, p. 225).

Of similar planning was the audience-hall of the Gonur palace and one can easily image how the two-folded doors fixed to the central column widely opened during ceremonial receptions.

Two passages from the chamber 188 lead into the vast chamber 119 of the inner hall type.From here through a series of other passages one could get into the most remoted places of the citadel including the ceremonial chamber 196 where in a recessed niche along the short wall a throne was possibly placed.A pair of small niches in the shape of a swallow tail is located in the corners of the room, the feature that finds its analogies in the Mari palace and especially in Alallakh in the ceremonial chamber 5 of the king Yarim-Lim palace (Woolley, 1955, p. 100, fig. 37).

The same hall communicates with the chambers 118 and 117 through the wide passage of the same type as the above described one with a low threshold and possibly a central column (this sector of the chamber was badly damaged by the grave pit of the third period).

From here through the chamber 224 one could get into a separate microcomplex, possibly a king's residential place.A small corridor clearly divides this microcomplex into two halves: in the northen section the central place was occupied by an inner yard (chamber 253) and in the southern - small, apparently living dwellings that could be used by the king's family.

Several interconnected chambers that form a separate microcomplex are located to the west of the audience-hall and the chamber 185 with blind windows has undoubtedly a special purpose.The same equally refers to the rest of the chambers including the chamber 192 with a complex fireplace.One more passage leads to the king's residence from the above-mentioned hall (room 119).

Directly to the south of this ceremonial complex is a small separately located microcomplex of a clearly household character where the central chamber 115 has preserved a thick layer of burnt grain on the floor. In the rest chambers of the same microcomplex there were found numerous intact pits including large vessels of the pythos type for saving products (up to 30 pieces in one room). Some of them were dug into the room floors.

Another constructional complex was located in the northwestern corner of the by-pass corridor of the citadel and judging by several hearths (rooms 247, 255, 326) was apparently used as dwelling premises for the guard and those who served the palace.

Finally, two vast yards A and B with long by-pass corridors are located in the southwestern sector of the palace. Two similar architectural structures of the still unclear purpose directly contact the palace in the north and south.

The southern construction includes chambers 1, 2, 3, 10, 11. Nevermind their good preservation, the chambers are characterized by the lack of any passages.They are all unplastered inside and are fully filled from the floor and up to the preserved line of walls by clean, presumably river sand.

The chamber 1 is especially characterized by a brick "segment" in one corner and a brick pedestal in the middle of the eastern wall. Both of them are supposed to be higher than the survived level of the sand filling. The chamber 11 ends with stairs consisting of four steps by which one could climb above the level of the sand chambers and correspondingly above the pedestal (Fig. 40, No 2).

The northern architectural structure has principally the same planning with a four-stepped staircase (Fig. 40, No 1) that led to the level of the sand chambers (88, 148, 171, 181). Among them, stands out the chamber 148 with a small protrusion in the middle of the eastern wall and a square pedestal (Fig. 40. No 3) in the center that directly remind the same structures inside the chamber 1. Like the above-described chambers these ones are also blind,have no passages,are unplastered inside and filled up with clean, supposidely river sand from the floor and up to the level of the preserved walls.

The similar functional purpose of these two architectural constructions seems to be undoubtful since in both yards they are located on two opposite sides and at the same length along the long axis (a little over 30m). It seems likely, that the sand filling of chambers represent platforms above which the pedestal elevated, that in their turn were overlapped by winding staircases.

The same thing is observed in the palace of king Yarim-Lim (room 10) and in the palace of Niqmer (room 27) in the Alallakh (Woolley, 1955, fig. 35 and 45). This fact, alongside some other analogies between the Gonur palace and palaces in Alallakh almost completely denies the element of accidental similarity. The relatively thin palace walls do not suppose the existence of the second floor, though this doesn't deny the existence of some elevated structures on some sections like the church towers, as it was suggested for Alallakh.

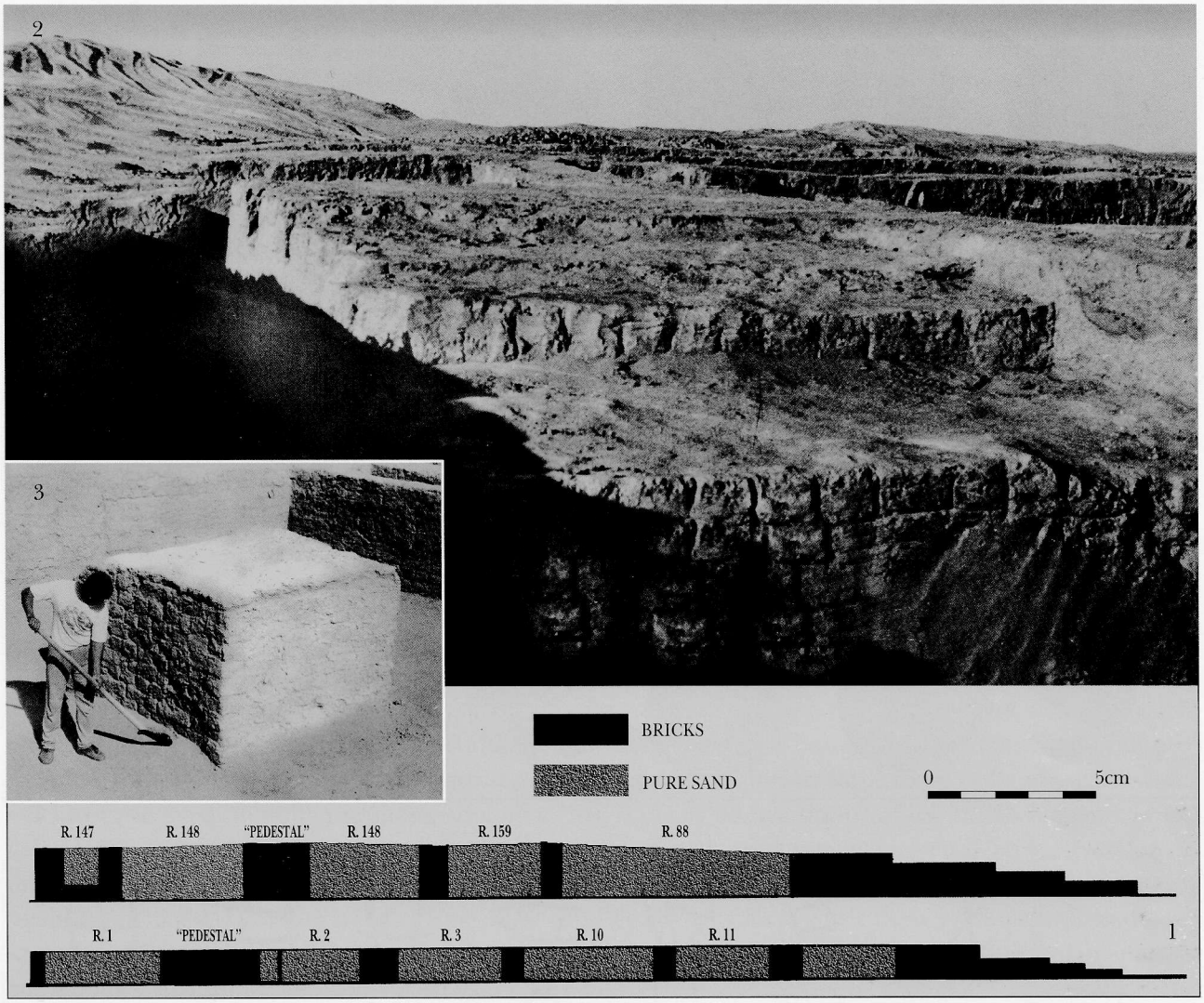


Fig. 40. Margiana. North Gonur. Palace. Section through the sand-filled rooms (1). Stairs (2). Pedestal in chamber 148 (3).

In the west, this architectural structure communicates with a separate microcomplex that consists of several large chambers. Amid them one can indicate the small square chamber 48 with a centrally located hearth and a lot of receased niches and a fireplace as well. Its direct destination remains still unclear but a special, not household purpose seems most probable.

In the northeastern corner of the citadel but outside the limits of the palace, an architectural structure was partially excavated. Its planning represents a number of long narrow wards or cells (up to about a meter high and a half meter wide). To some extent this structure reminds the plan of the yard of the third fire temple described below. All of them are blind,inner surfaces of their walls are carefully plastered ,they had arched ceilings, above which there was a flat roof made of one layer of bricks. It is most likely that these chambers as well as the cells of the fire temple were not household, but of some special destination and can be looked upon as a diminished copy of the shops that remind a square of narrow long chambers of the Hittian temple in Hattusa, as it was mentioned above in more details.

Though the excavations of the palace are not yet finished, there are still grounds to believe that it was built according to a single and well-thought of plan that is characterized by the combination of symmetry, rythm and harmony.

The Gonur palace in its general form reminds to a certain degree the Zimrilim palace in Mari.They have a general planning principle, two vast yards with long narrow by-pass corridors, also typical "blind windows". Besides, this similarity includes such details as a chain of narrow cells, a location of paired corner niches in the shape of swallow tail in the inner courtyard of the Mari palace. It should be mentioned

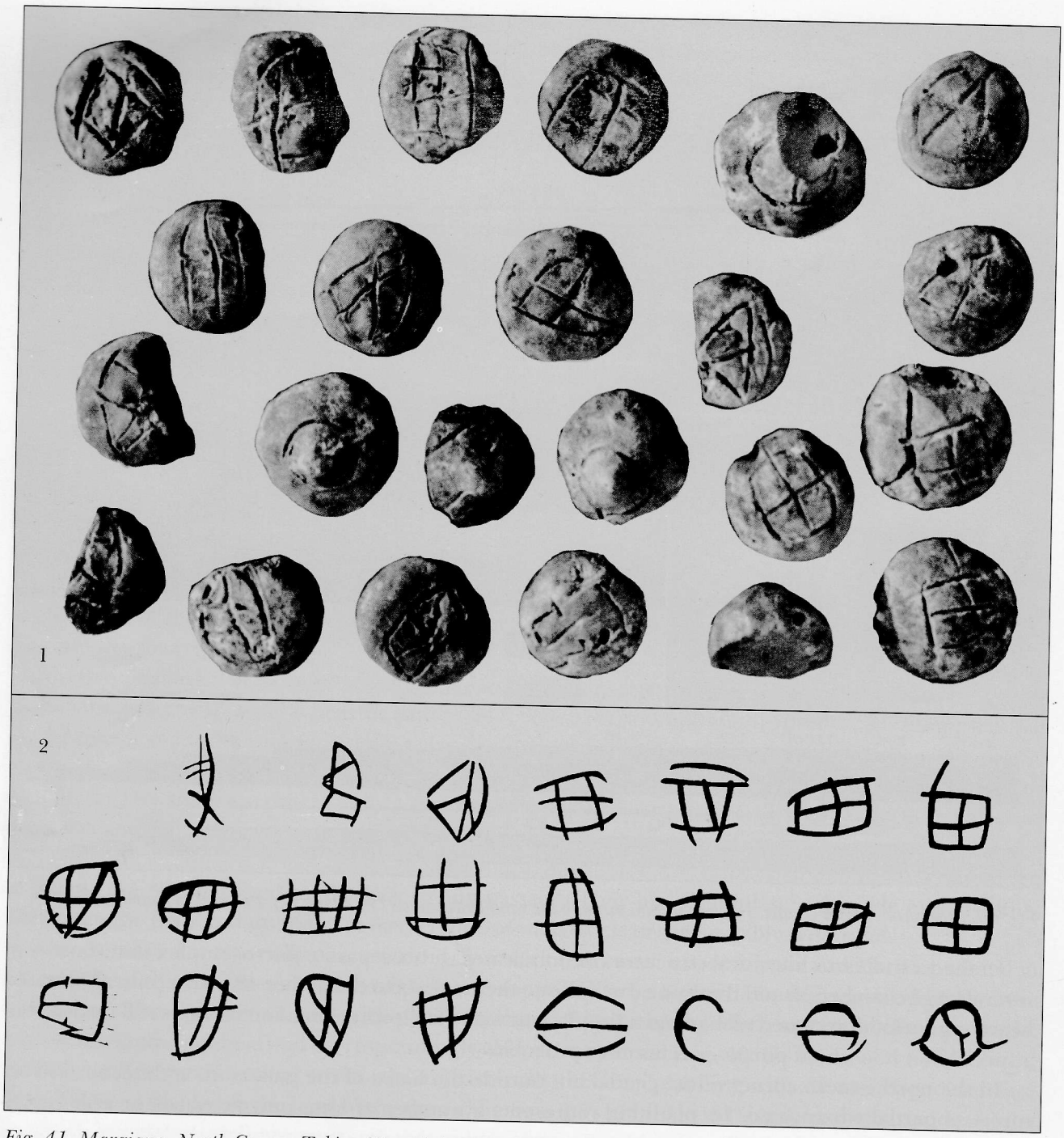


Fig. 41. Margiana. North Gonur. Tokins (1) and signs on them (2).

that in Mari next to the palace is a temple of Dagon with podiums in the shape of the letter T. They directly correspond to absolutely the same podiums in the sacred chambers of the Margiana temples, as for example in the chamber 36 of the Togolok-21 temple.

There are noted still more fundamental features of similarity with the monumental architecture of north Syria. It concerns first of all the above described wide passages with a centrally located column in the clearly ceremonial and double chambers of the Gonur palace that are similar to the double palace chambers in north Syria. Thus,mainly in the ceremonial and often double chambers in Ras Shamra there are preserved wide passages with columns (Lampe, 1968, fig. 111) that leaves no doubt in their similarity.

The same kind of similarity is traced in other monumental structures of Syria, as for example, the Yarim-Lim palaces and especially the chamber 28 in the Niqmer palace in Alallakh (Woolley, 1955, fig. 34, 45). There also exist clearly ceremonial (often double) premises with wide passages and dug-in

wooden columns that rest on the basalt disks, thus directly reminding the analogical structure in the audience-hall of the Gonur palace.Moreover, such passages in Syria and Margiana were formed by the protruding figured jumbs located opposite each other and joined together by low thresholds with columns dug into them.

These jumbs are also found on other monuments such as Tell Tayana, Zincirli, Sakjegeuzi (Margueron,1977.). So far, they are not noted either in the Hittite or in the Mesopotamian monumental architecture. There is an opinion that in this case they reflect a strong Aegean influence (Moortgat, 1969, p. 79) and even an Egyptian one. To a certain degree this may be applied to the monumental architecture of Margiana. Though so far, the center of origin of these structures is unknown there still grounds to accept the opinion that the architecture of Syria generally differs from that of Mesopotamia and demonstrates the independent way of development. It probably represents the Hittite and Mitannian element in the ancient Oriental architecture (Moortgat, 1969, p. 107) which in an indirect way could be reffered to the Margiana one.

Scientists have already noted that wide passages with columns of the portico type that led into the ceremonial chambers are characteristic features of the monumental architecture of north Syria (Frankfort, 1954, p. 167) and their existence in the Margiana structures cann't be accidental.In general, it is clear that there are strong proofs to believe that in the general form the Margiana monumental architecture reflects the influence of the Syro-Anatolian, (and more widely, Levantian) traditions transformed in the new Central Asian territory.

These, as well as other documental evidence leave no doubt in the existence of common planning principles in the monumental architecture of Syro-Anatolia on the one hand and Margiana and Bactria on the other.They seem to belong to a common architectural school,though unknown yet.Similar monumental structures were unknown in Central Asia in the previous period while some isolated architectural blocks of the Syro-Anatolian region find convincing roots in the traditions of the north Mesopotamian architecture (as, for example, "blind windows" of Tepe Gawra and somewhere else). At least, so far on the ancient Orient there is no monument which plan can be directly compared with the Margiana one. It seems most likely that from here as a result of the migration of local tribes these architectural traditions were brought to the new homeland, to "Outer Iran", which is partially confirmed by the Margiana palaces and temples, including the Gonur palace.

Monumental structures of Margiana and especially the Gonur palace clearly witness the extremely high level of development of social life in Margiana which is undoubtedly marked by the existence of the king's power and social stratification. The Gonur citadel with the by-pass strong defensive walls, with the centrally located king's palace identifies the symbol of power and wealth that contradicted the life of the poor people who lived in shabby houses located round the king's citadel.

Finally, it should be noted that during the excavations of one chamber by its central,northern entrance there were found 26 clay tokens with scratched signs that had the shape of cones or cakes. (Fig. 41). This find has an exceptional significance. The tokens were piled together and possibly placed in one small bag. It is well accepted that the tokens were used as archive counters. In the Near East the overwhelming majority of these tokens was found in palaces and temples (the Gawra temple in Uruk) or in the gate entrances or city gates (Biblos) and also often in piles (Schmand Besserat, 1992, p. 97). This very closely paralleles the situation in the palace of Gonur.

It is absolutely correct to assume that in Mesopotamia the finds of tokens with signs correspond to the time of the origin of real cities, as well as to the final establishment of a state system and the appearance of priest-kings. In other words tokens with signs witness the existence of a developed bureaucratic system when priest-kings used these tokens for checking the managment of the ancient economy (Schmandt Besserat, 1994, p. p. 15-20). And the finds of tokens in the Gonur citadel also speak for the existence of a complex organization of the local society that had its priest-king who apparently lived in the palace of the citadel. The find of the tokens at the central entrance most probably testifies to the fact that they were used for the taking stock of food and cattle. An inspector could make this easier standing at the gates of the citadel.

Ritual Monumental Architecture

Temple of Togolok-21. At the site of Togolok-21 there are two mounds: on the northern one is a small settlement with potters' quarters on its outskirts and on the other hill some 200 m to the south is another settlement. It is very low in relief, being only 1 m above the surrounding edifice. It was here where a monumental structure —apparently a temple— which dates to the late II millennium B.C. was excavated. It was built on top of a small natural elevation. Rectangular sunbaked brick (with dimensions of 44 x 24 x 12 cm) and clay mortar were used for its construction. The monument was badly preserved. Due to natural erosion the walls were almost completely destroyed and stood no higher on average than 0.5 m (very rarely 10–15 cm) above the surface level. For this reason in some cases the floors were found on the surface level.

There are three periods established in the construction of this monument. In the first period they built the whole building, which consisted of a centrally located "fortress" and two rows of rectangular walls, one inside the other (Fig. 42). In the second period during which there was a noticeable decline in construction, they started to build dwelling houses with household buildings on the edges of the monument. The walls of the first period being built on the ground level, those of the second period stood on the cultural layers that mainly consisted of garbage and ashes. It should be noted that during this second period no signs of house

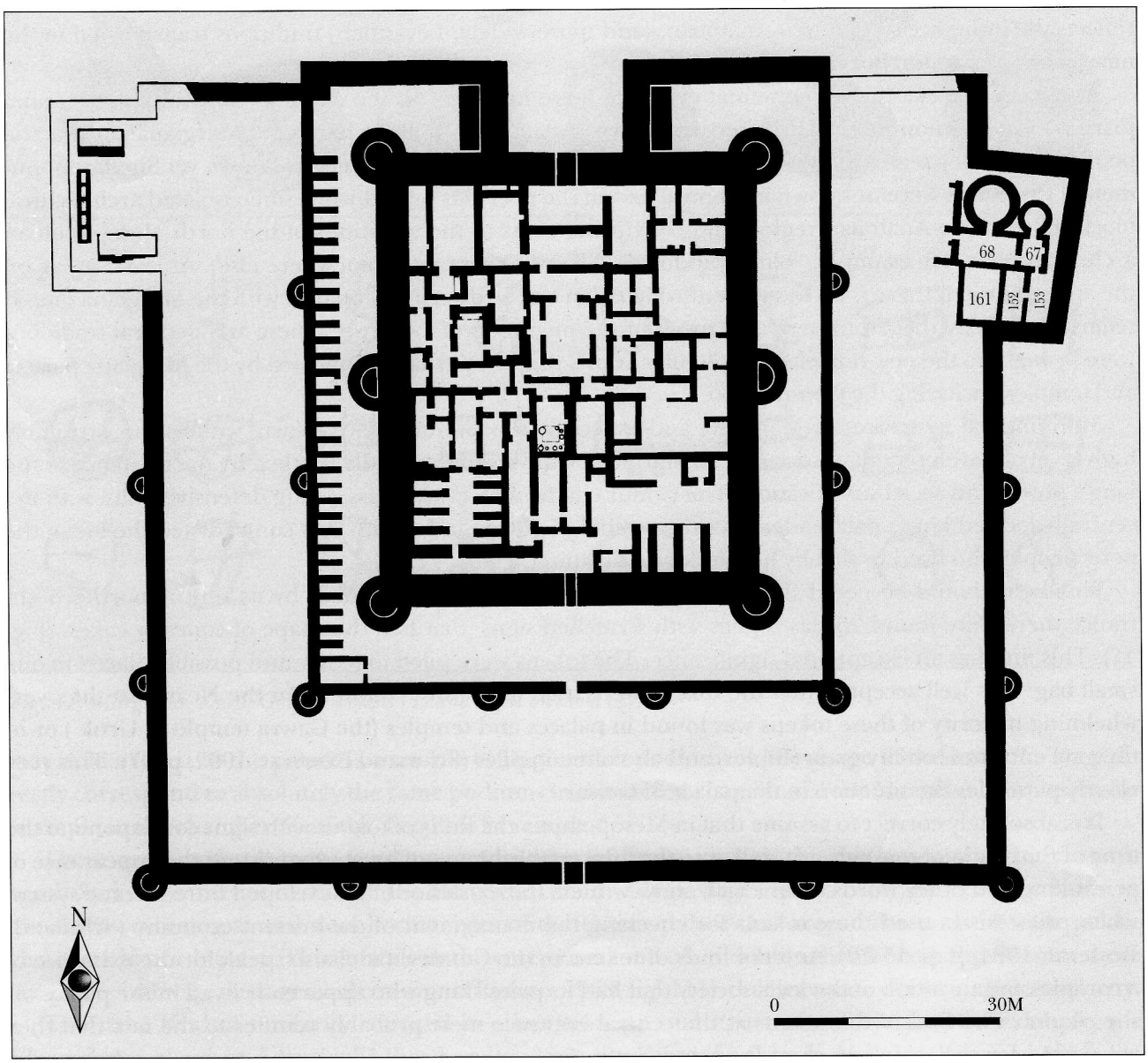


Fig. 42. Margiana. Togolok-21. Temple. Plan of the first period.

building were marked in the central section of the monument. Finally, in the third period the site was deserted and its ruins served as a cemetery. In the area of the central "fortress" no burials were found.

Obviously, from the very beginning the natural elevation was encircled by a huge rectangular outer wall (140 x 100 m) laid out strictly according to the cardinal points. The width of the outer wall was 2.5 m and the height probably reached 5-6 m. Round towers were placed on each corner while semi-circular hollow ones with no traces of a staircase inside were located along the perimeter of the walls.

The inside of this gigantic rectangular structure was unbuilt. It was apparently used for large meetings. Only in the northwest and northeast sections inside the surrounding walls two squares with a special design and purpose were arranged. One of them, called "a ground with the fire altars", is located in the northwest corner and consists of two badly preserved rectangular "chambers" based right on the soil. The one in the south corner is encircled by a thin wall built up of one row of bricks. Its initial height was probably not more than 0.5 m. It might be an open chamber with walls on edges with niches and passages that by the time of excavations had been capped from inside by a brick layer (Fig. 43, No 2). The northern platform has been preserved in even worse condition but initially it also had a small wall on its outer edge.

In front of these rooms there were five chambers dug in the virgin soil strongly burnt on the inside. The absence of any kind of ash-pits or ventilation holes may be used as a proof that the platform was not

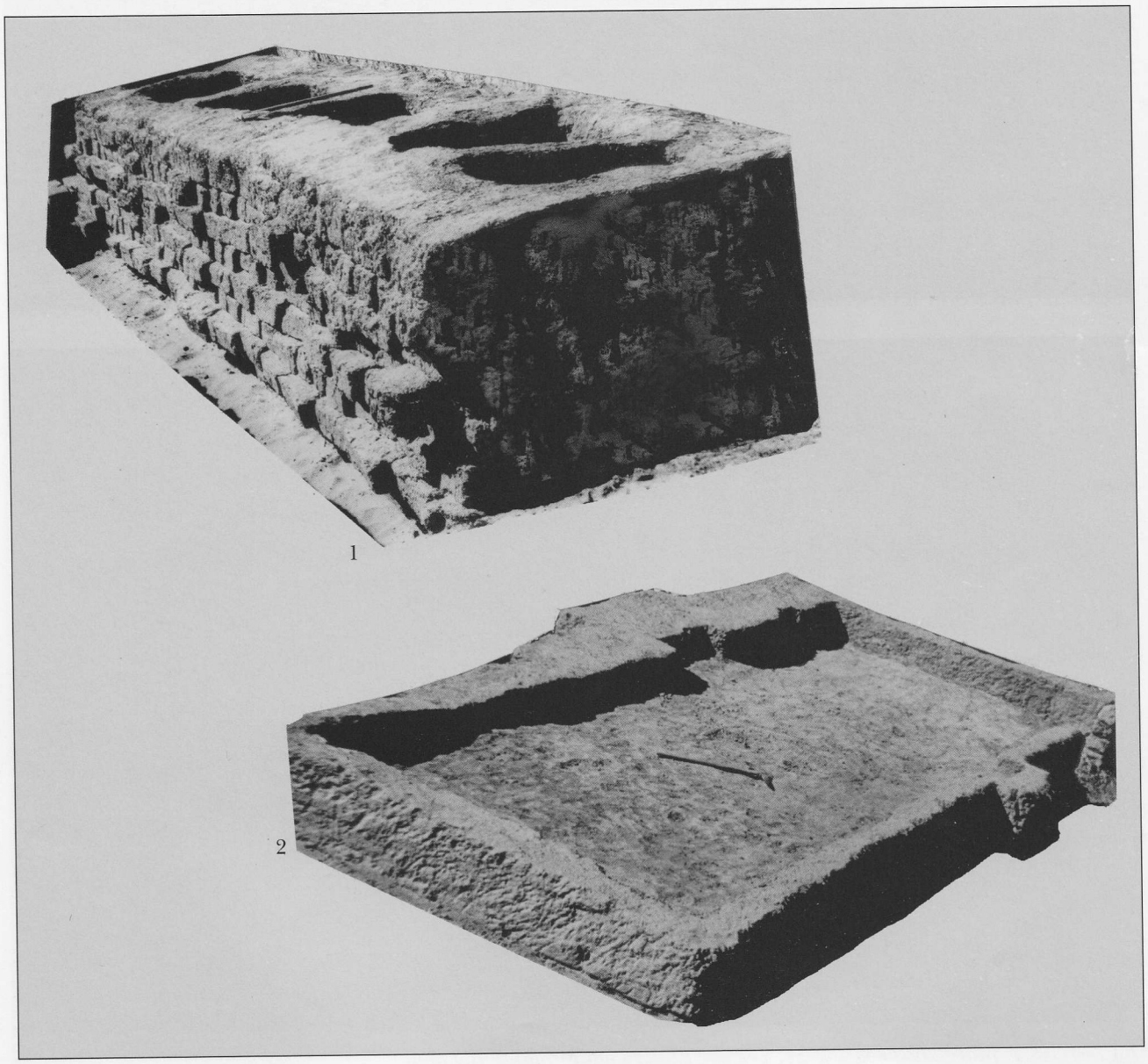


Fig. 43. Margiana. Togolok-21. Temple. Western altar grounds. Fire altars(1)and supposedly p a v i (2).

used for every day purposes; on the contrary one can assume that the "ground with the fire altars" served as a place for the performance of certain ceremonies. These could be the ceremonies connected with the cult of fire that burnt in the altar in the honour of gods that, unseen by the public, were presumably sitting on the platforms. Five altars of fire made of brick are situated between them (Fig. 43, No 1).

It is known that in the Zoroastrian religion the altar grounds were located in the open air and next to low and simple altars right on the ground they arranged small rectangular squares or in other words p a v i. They were looked upon as "pure sites" where presumably the invisible gods were seated enjoying the fire burning in the altars in their honour (Boyce, 1989, p. 166). This description clearly recalls the constructions of open "chambers" on the altar grounds of the temples from Togolok-21 and the Gonur temenos. I belive it to be not mere chance that we revealed not only fire altars, but also both chambers opened from above, which served as a kind of p a v i, locked, as if "sealed", by bricks in order

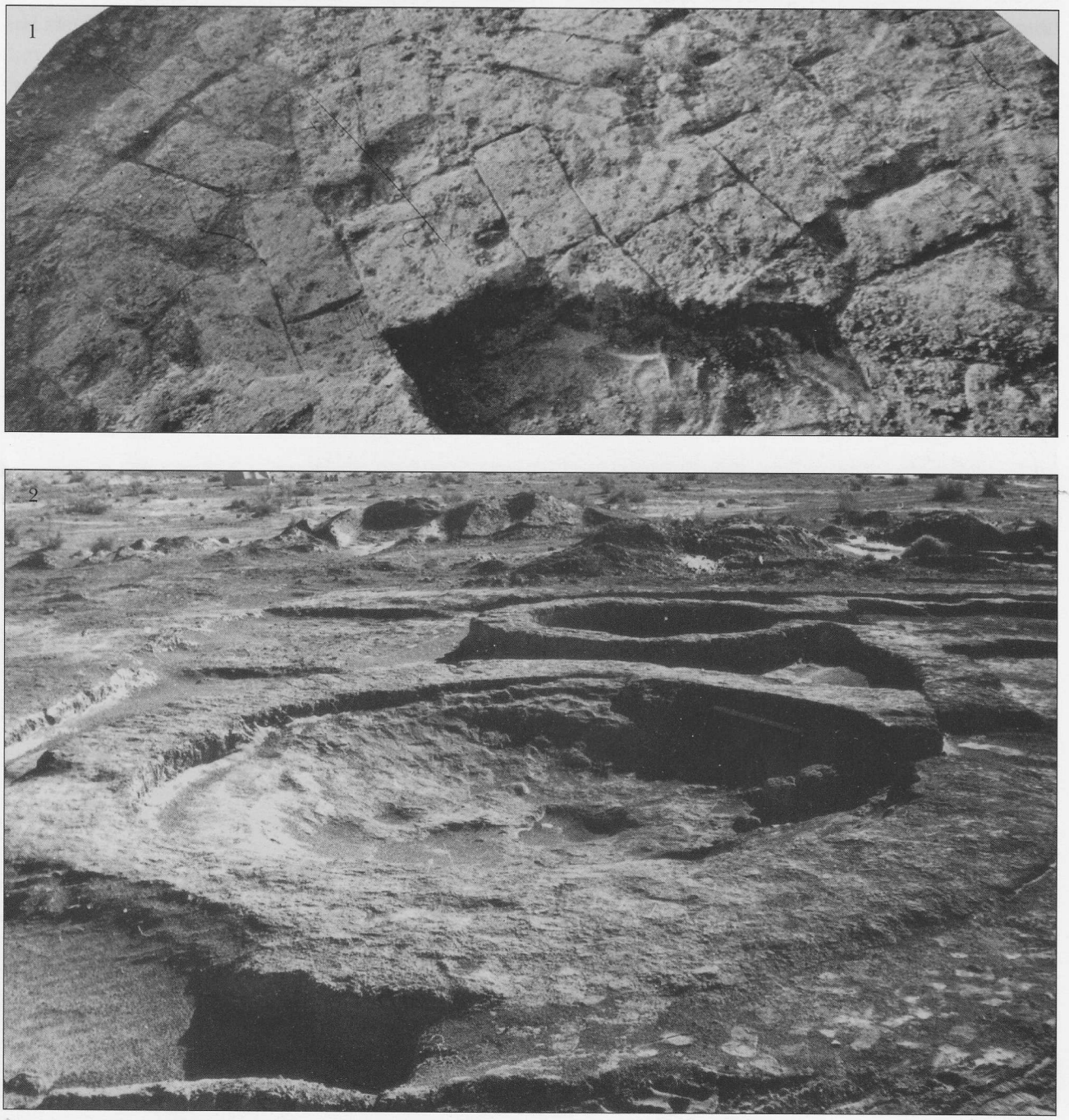


Fig. 44, No 1. Margiana. Togolok-21. Temple. Eastern altar ground. Big altar. The brick lock before excavations (1), after the brick lock has been removed (2).

to prevent their possible profanation in future. Such practice is known in all temples of Margiana and Bactria that is one more evidence in favour of the cult-ceremonial destination of the altar complex in question. The same practice was revealed in the Tepe Nush-i-Jan fire temple in Media.

The second "altar" ground located in the opposite corner of the complex was carefully made of brick. Several interconnected rooms were built on this square. That it had a special purpose is witnessed by the fact that the walls and floors are covered with white gypsum. From two of these rooms there are passages that lead into two round altars of different size that are located in the small open courtyard. The smaller of the two altars was filled with a thick layer of white ashes and then capped as if "sealed" on the top by a complete brick layer. The walls and floors inside this altar had traces of light burning, thus giving an impression that it was used for storing charcoal that was burnt somewhere else.

The construction of the second big altar is more complicated. The excavations discovered that initially a large pit was made in the soil and its walls inside were brick lined. On the bottom of the pit almost three meters deep there was found a layer of ashes that proves that a large fire was once burnt there. On top of this ash layer there were built brick walls in the shape of a cross and in each corner of this cross five pithoi (large storage vessels) with their bottoms turned upwards were dug and on top of them a brick floor was built that served as a bottom for the very early altar. In the center of the altar inside a small depression there was a thin and clearly marked ash spot. Among the pithoi, some of them over 1 m high, a small vessel with two tube-like spouts that found direct analogies in Bactria was noted (Fig. 44, No 2).

Further up, there was found a sand layer with a burial and two pithoi. It apparently marked some period of interruption since this layer was again topped with a clearly distinguishable level covered with ashes that are not found in the center of the altar. Finally, in the last period the bottom of the altar was made in the shape of a cone with a centrally located small depression filled with bits of coal and ashes. During all three periods the entrance to the altar was not changed and was linked with the adjacent room by a passage. At the entrance to the altar on its crater-like surface there was found a thin layer of a large crust (up to 1 m in diameter) of some dried-out liquid. The remains of this crust have been analyzed by Prof. N. Meyer-Melikian at Moscow University and were defined as remains of dried-out fat and milk. It seems

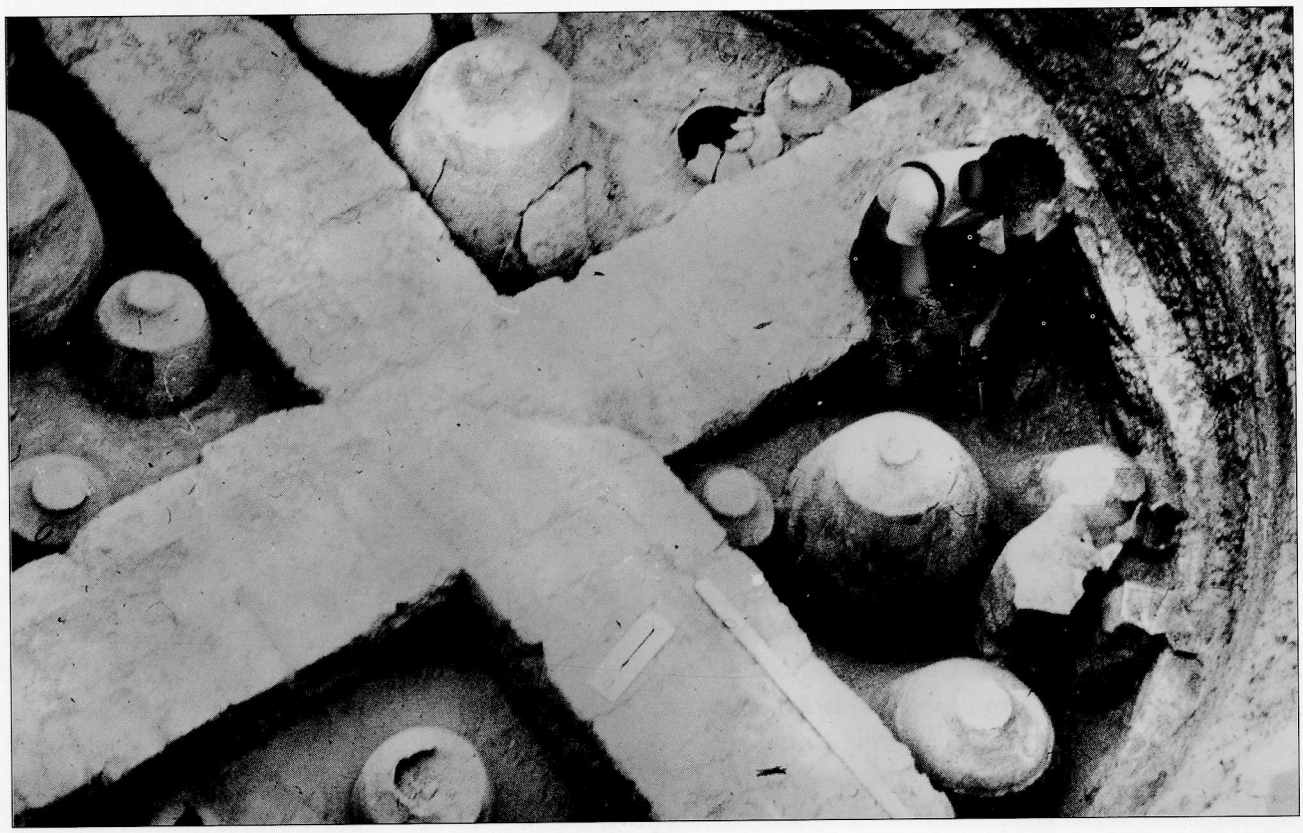


Fig. 44, No 2. Margiana. Togolok-21. Eastern altar ground. Big altar. Lower part with pithoi at the bottom.

most likely that during the ritual ceremonies the fat of the sacrificed animals dripped in the center of the crater-like altar for the brighter burning of the fire in it. It corresponds to our finds of a crater-like "cup" with a "hearth" at the base. Apparently, the fat following the slope of the crater, ran down into the fire at the bottom, making it burn brighter. The excavations showed that this altar was also capped from the inside as if "sealed" by brick fragments, and on the top it was covered by a layer of intact bricks. (Fig. 44, No 1).

The "crust" at the entrance to the altar as well as the bone tube found there (it was most probably used for cult libations) made it possible to assume that the altar was connected with ceremonies of frequent libations. It is extremely significant that real altars of fire are rectangular in form, while the roundish ones were mainly linked with cult libations, though the last idea needs to be clarified. It also has to be noted that no altar square is located in the center of the temple they are somehow "hidden" in corners behind high solid walls.

Inside the uncompleted square of the first wall there is located another one (80 by 70 m) with walls 1.5 m wide and possibly 3 m high (Fig. 43). Like the outer wall, it also had round towers on the corners and semi-circular ones along the perimeter. The whole inner area of the rectangle was free from buildings except for its western section where 30 extremely narrow chambers were located in one row. They are all of one type and have passages on one and the same side. One of them has preserved organic remains, possibly of a rag, on the floor.

Finally, inside this wall was built another centrally located building of a citadel type. It is 60 by 50 m, its walls are 4.5 m wide and it has round towers on the corners and semi-circular towers in the middle of the western and eastern walls. The width of its walls makes it possible to assume that they were up to 10-12 m high and that almost a million bricks were used during the construction (Fig. 45).

In the northern section of the whole complex are the remains of a badly preserved central entrance flanked by forwarded pillars. In the middle of the southern fortress wall is a second much narrower passage that links it with the square inside the second wall.

The location of the "fortress" in the central section behind the walls of two rectangular fences leads us to believe that this was the main, sacred area of the whole complex of Togolok-21. The layout of the "fortress" reveals a careful plan and a strictly functional purpose. It is clear that the construction was done all at one time according to one plan and is marked by the accurate configuration of its rectangular buildings that make up one complex area with several microblocks for special purposes. The inner building of the "fortress" is divided into two halves by a row of narrow and corridor-like rooms: the northern official part and the southern auxiliary one.

It is characteristic that almost all the rooms of the official section are covered by white gypsum layers (sometimes up to 7-8 layers) not only on the walls but on the floors as well. This fact speaks for a special purpose of these rooms. The central place in the official section is occupied by a "covered courtyard" (room 23) with a vestibule (room 20) and three surrounding corridors (rooms 14, 24 and 39) so that all these rooms make up a kind of sacred part in the system of the whole "fortress". It was here where possibly all the main cult ceremonies took place. The definite character of these ceremonies remains unclear but the excavations uncover evidence that at some stage certain reconstructions —connected with the sacrifices performed there— were done in the "covered courtyard". During this reconstruction under a ceramic floor (that was initially absent) there was built a drainage system in the form of a trough made up of fragments of large vessels. By comparison with places of sacrifices in the Mesopotamian temples we can say that this area was used for killing sacrificed animals and the drainage system was constructed for the blood flow. A similar picture is seen in room 2, but this one dates to an earlier period and was cut through by a very large pit.

The "covered courtyard" making up a central section of the fortress, the west side microblock (rooms 38, 22, 36, 37, 48) was most likely connected with praying ceremonies. This statement is proved by the two similar rooms 8 and 36 with special brick elevations-podiums covered with a snow-white gypsum layer and located in the butt ends of rooms. Both rooms apparently were used as cellas and they surprisingly resemble rooms 2 and 3 of the round temple of Dashli-3 in north Afghanistan. It is significant that this microblock was totally closed off from a "covered courtyard" that was located nearby. The courtyard was connected by a common passage with rooms 25-28, 40, 41, 47, 49, 54, 57, 59, 60,and 62-65 to the south of it.

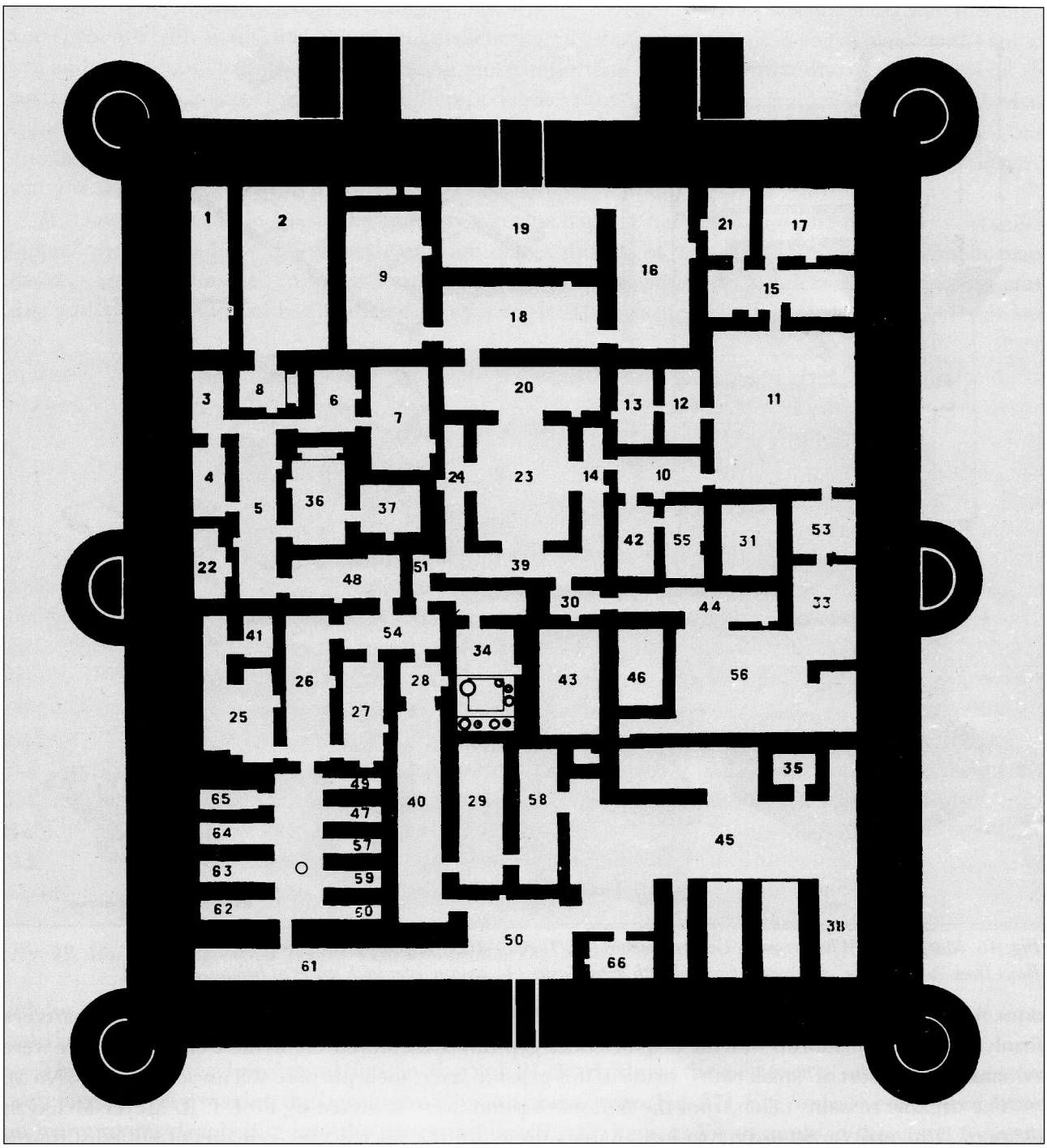


Fig. 45. Margiana. Togolok-21. Temple. Plan of the central part.

Located in the site's southwestern area, there is apparently a complex of buildings separated from the rest of the "fortress". Among these buildings or microcomplex are situated two rows of long narrow cells divided by a corridor in the middle of which a well had been dug in the late period of occupation of the site.The upper part of the well had a facing of radially laid bricks making a circle.A similar type of lay-out with long isolated cells divided by a narrow corridor was discovered in the palace of Dashly-3 in Bactria.

It is appropriate to note the existence of a well with a special path leading to it in the fire temple of Djarkutan.

Room 34 or "white room", located in the south auxiliary section, reveals a most specific purpose. The room is connected by a system of confused passages with the "covered courtyard", a fact that may indicate their functional interconnection. The construction of a "white room" sharply differs from that of the other

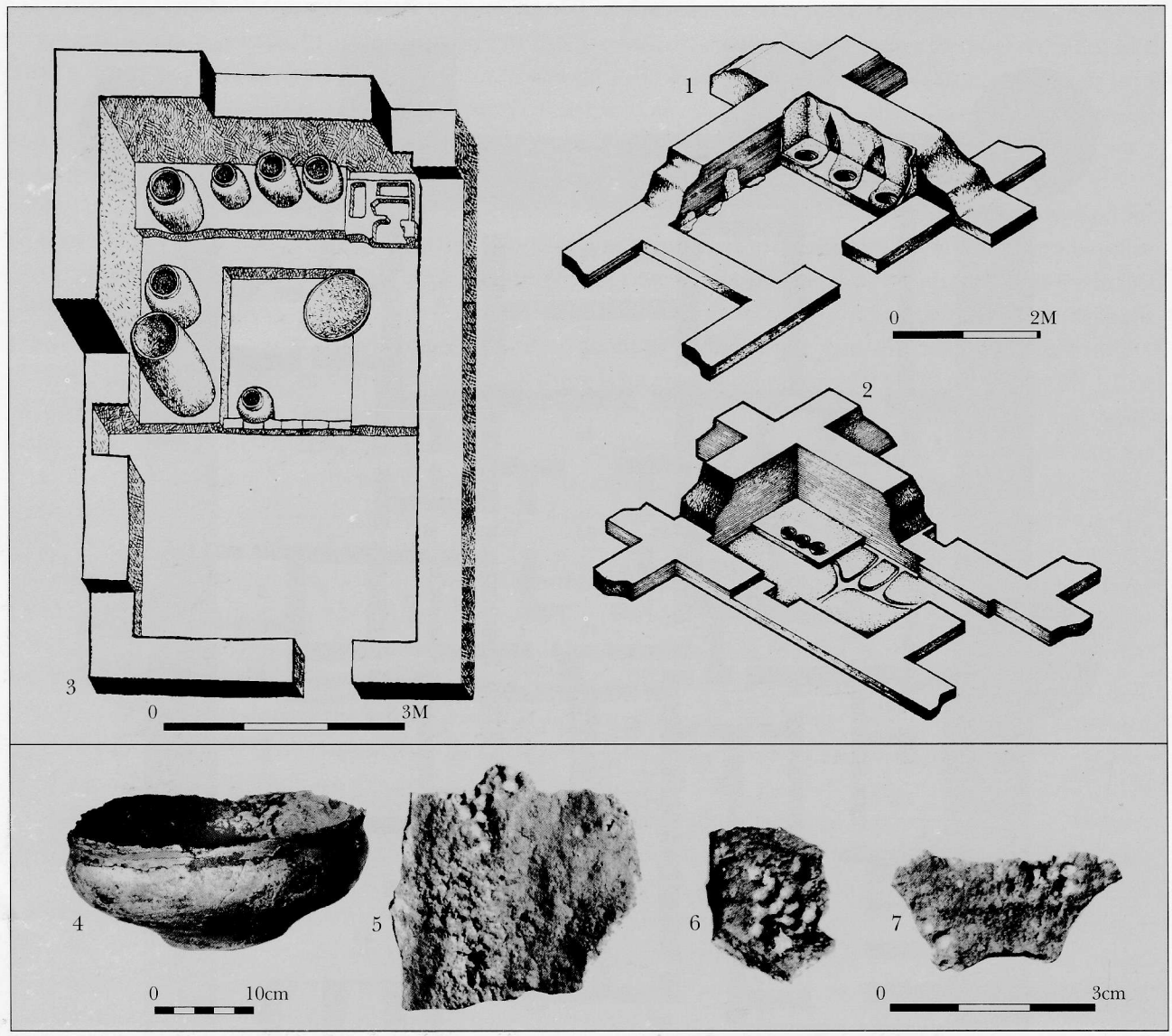


Fig. 46. Margiana. "White rooms". Gonur temenos (1), Togolok-1(2), Togolok-21 (3).
Bowl from "white room" of temenos covered with gyps plaster (4), gyps plaster with traces of hemp seeds (5-7).

ones. Along its walls there are built special step-like brick platforms with dug-in pithoi whose bottom parts are firmly fixed to the platforms with the help of a thick gypsum layer. Moreover, on these elevations there were remains of some sort of "small baths" made in this gypsum layer, their purpose still unclear (Fig. 46, No 3).

The organic remains taken from the bottom of pithoi were analyzed by Prof. I. R. Meyer-Melikyan (Moscow University). According to her analysis these are the microscopic remains of ephedra that is known to contain ephedrine, an alkaloid extract. On the floor of the "white room" was found a bone tube with engraved images of exaggeratedly large eyes, fully corresponding to the above-mentioned tube from the large altar. In the laboratory of the Moscow University concentrations of poppy pollen were found inside the pipe. Microscopic traces of poppy grains were found on stone grinders and pestles. Remains of ephedra and poppy being found not only in this room but in rooms of the "fortress" of Togolok-21, this certainly reduces the element of accidental occurrence. Pollen might have been blown in by wind, but this could not happen with the remains of poppy grains and small ephedra twigs.

Thus, the "white room" is believed to be connected with the preparation of intoxicating and hallucinogenic beverages. It seems then logical that all the bone tubes had images of exaggeratedly large eyes with large pupils. It is known that the eyes of drug addicts have enlarged pupils and all the things around them acquire unrealistic, large sizes (Fig. 22, Nos 3-5).

Thanks to the remains of ephedra and pollen that were found at Togolok-21 this site stands out

among the known monumental structures of the whole of Near East. If one remembers the fire altars and "grounds with altars" then it becomes evident that two cults were practised at Togolok-21: the cult of fire and the cult of libations, the latter being more important. It is known that intoxicating drinks were used in many religions of the world (in different degrees) but only the Indo-Iranian, Aryan tribes had attributed so much importance to this cult, though practising at the same time the cult of fire as well. Thus, one can characterize the Togolok-21 monument as a cult construction of a temple type that was connected with the religious ideas of the Indo-Iranian tribes.

It is known that in the Avesta the cult beverage was named "haoma" and in the Rigveda it was called "soma". Both texts have the same description of the process of its preparation. The mountain plant (haoma-soma) was soaked in water first, then they ground it with stone grinders and pestles and after that added some water and milk (including sour milk). The mixture was then enriched with barley and

Fig. 47. Margiana.Togolok-21 Temple. Vessels for libation (?).

left for some time in large vessels for fermentation. At the end of this complex process the juice was separated from the particles of plants with the help of special strainers.

The sum of the archaeological finds in Togolok-21 clearly shows the existence of all the attributes that were necessary for making the beverage of "haoma-soma" type (Fig. 47). Big conical vessels were found in many rooms deeply dug into the floors and in some of them, as for example in the vessel from the "covered courtyard", microscopic particles of ephedra were traced on the bottom. On the floors of many rooms in the fortress there were found stone grinders, pestles and grain grinders in a quantity (some of them with microscopic poppy seeds) that clearly surpasses the needs of any regular dwelling. Equally representative are the small strainers with holes on the bottom and especially some vessels of a standard conical shape. They were mid-sized with a large hole in the center of their base that would be covered over with tufts of wool, serving to filter the prepared liquid (Fig. 13, No 4).

It is noteworthy, that the question of the kind of plant that was used for preparing hallucinogenic drinks is not debatable any more since it is absolutely clear now that the inhabitants of Margush used poppy and ephedra. A special type of ephedra-intermedia presently grows in the piedmont area of the Kopet Dagh and we can assume that in antiquity it was this very plant that was brought to southeast Kara Kum. According to I. A. Steblin-Kamenski the modern Zoroastrians of India get this plant from Iran and use it for their cult ceremonies.

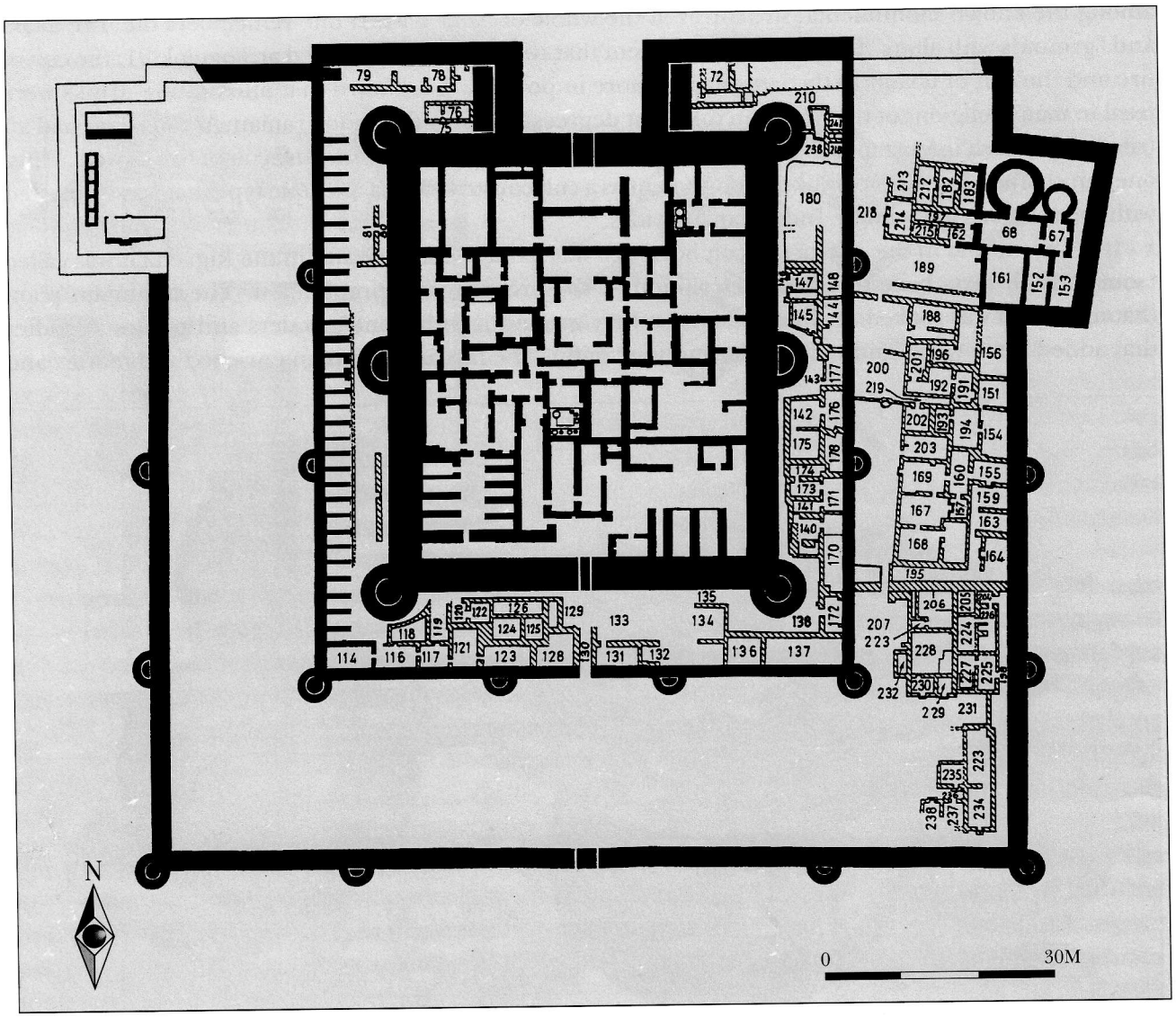
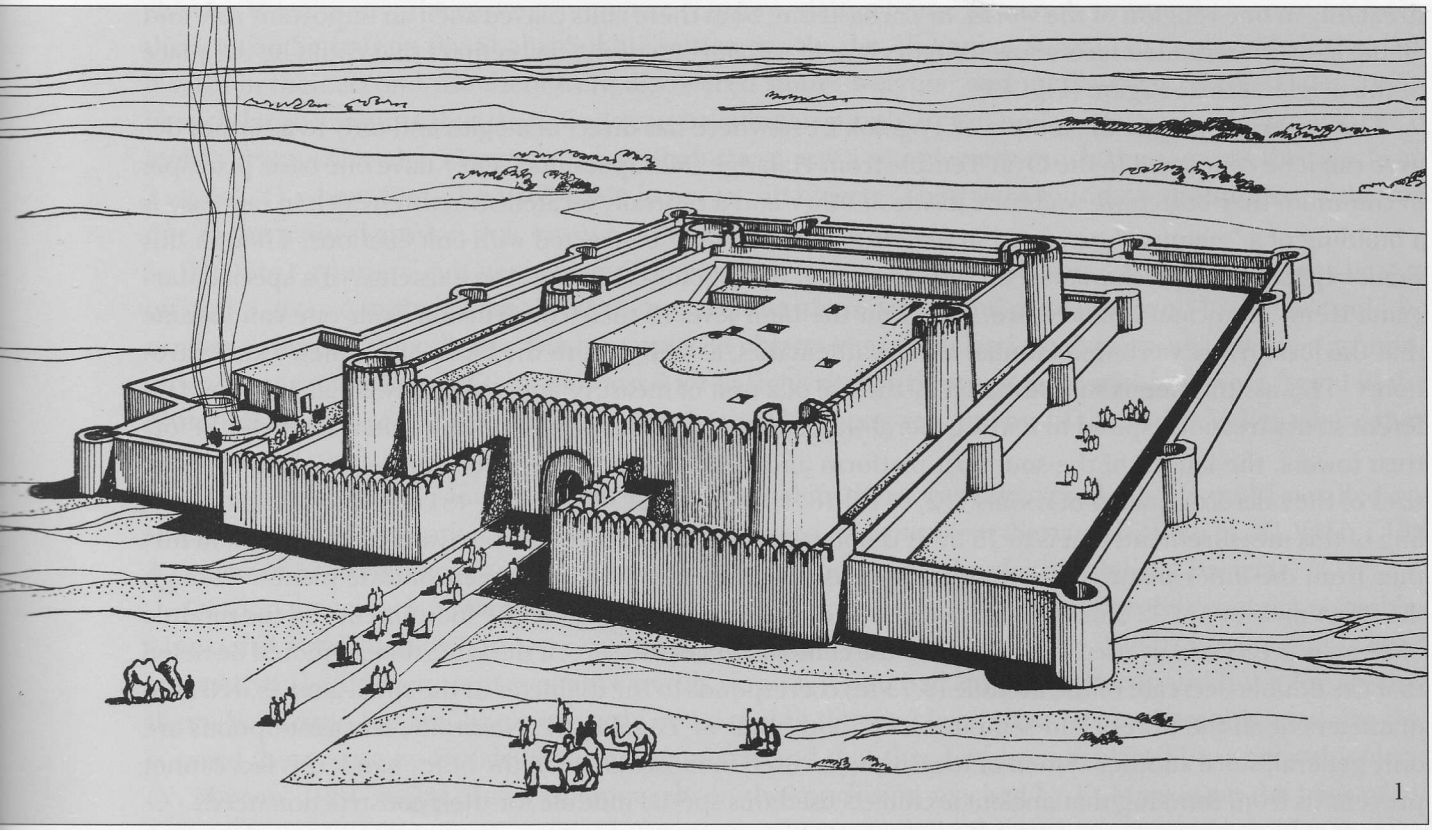


Fig. 48. Margiana.Togolok-21. Temple. Plan of the late period.

In Togolok-21 the preparation of the intoxicating drink took place in the central and obviously sacred part of the whole temple complex, demonstrating in such a way that the cult of libations was more important at that time than the cult of fire. Based on the available data we can more or less exactly reconstruct the process of cult ceremonies. The ready- made drink was divided among the sacred vessels and was first used during the ceremonies that took place in the "covered courtyard" probably accompanying the animal sacrifices performed on the ceramic floor with a drainage system under it. Following that, the procession through the south gates proceeded to the square inside the walls that was filled with worshipers and then they moved to the altar square and the square with platforms. The ritual libations could have taken place at the round altars when in the light of the burning coals of the small altar the sacred drink of the haoma type was poured from special vessels onto the large altar. Besides the above-mentioned "crust", a bone tube that was used for drinking ritual beverages testifies to the accuracy of this reconstruction. Almost every day the fire was lit inside the rectangular chamber-altars deeply cut in the virgin soil and located on the other side of the "ground with altars".

In the later period, some dwellings were built in the southern and eastern parts of the temple. They were used as houses for those common tribe members who presumably served the central part of the fortess which remained untouched by these reconstructions (Fig. 48).

Though our present conclusions are far from being precise, we can definitely say that Togolok-21 was a monument of a public purpose, a sort of "cathedral" connected with ritual libations and with the cult of



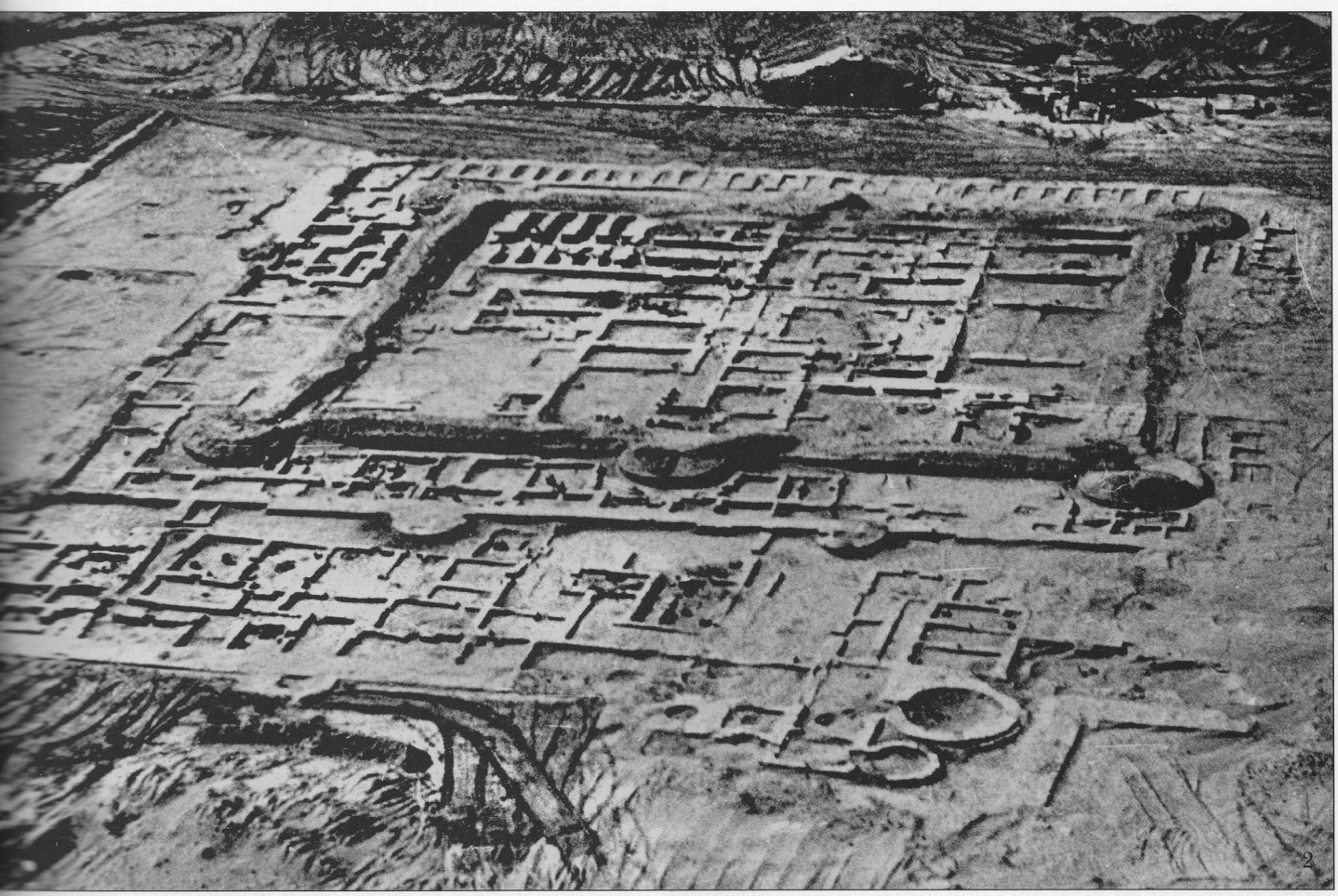


Fig. 49. Margiana. Togolok-21. Temple. Reconstruction by V. Antonov (1). Aerial view (2).

fire. Only in one religion of the world, in Zoroastrism, both these cults played such an important role and all the above-mentioned facts allow us to declare Margiana one of the few centers that could be the place of the origin of this religion (Fig. 49).

The general layout of the temple of Togolok 21 nowhere has direct analogies and only to a certain degree can it be compared to the Oval Temple from Hafadge (Mesopotamia). They have one basic principle in common: they both have walls one inside another and a centrally located structure which in one case is a building of a "ziggurat" type, and in the other —a "fortress" connected with cult libations. Though this similarity has a formal character, the unique layout of Togolok-21 proves the existence of a special Margiana trend in ancient architecture. Based on the high level of their construction skills one can assume that the local tribes were well familiar with mathematics, as well as with the bases of geometry and astronomy. This assumption is substantiated by the use of a unit of measure approximately equal to 7.5 m. Different structures correspond to it in a general way, such as the diameter of the large altar, diameter of fortress towers, the length of the southern platform and building, including the "covered courtyard". The sizes of the microcomplexes of rooms 1, 2, 9, 16, 18, 19 and 3-9, 22, 36, 37 and 48 correspond to the doubling of this measurement, that is to 15 m. It is noteworthy that the "covered courtyard" is located 15 m further from the inner plane of the western and eastern walls and 22 m from their outside planes. Though the exact measure of 22.5 m. does not correspond to the general layout of the monument still the module of 22 m. was very widely used everywhere in the construction of this site. At the same time, it should be noted that the double decrease of the module (3.75 m) corresponds to the diameter of the small altar as well as to diameters of all the towers and semi-towers of both walls of Togolok-21. Naturally, our assumptions are only general, since another system of measures was used in those days. On the other hand, this fact cannot prevent us from thinking that ancient architects used this special module for their construction needs.

In the southeastern part of Togolok-21 behind its surrounding wall there was found a large deposit of ashes (4x2 m and over 1 m deep) and a lot of ceramic shreds. A similar but still larger deposit was also found in the southeastern corner of the assumed temple at the capital, Gonur-1. These deposits most likely demonstrate a very careful attitude of the temple servants towards the ashes left on the altars.

The set of finds mainly from the surface of the "fortress" floors also indicates the cult purpose of Togolok-21 temple. These finds include a ceremonial axe, a steatite cone with an image of "a mountain with a tree", a typical motif of the Mesopotamian glyptics. Only in this case, it has an image of snakes standing up on their tails, which is evidence of a local interpretation of an imported subject. Of special interest is another stone amulet made in the best traditions of ancient Anatolian art. It represents a camel licking its hind leg. The amulet is made in high relief with all the details very delicately engraved. On the reverse side is a deeply cut ferocious bull that is being attacked from above by three eagles, and behind it one can see the legs of a jumping figure, an acrobat most likely. A woven pattern that seems to have no end or beginning separates the bull from the second composition that has preserved two human figures, one intact and the other in part. On the flat side of the amulet a hunting scene is carved and though the figure of a hunter is not preserved one can see a taught bow with an arrow, a hunting dog and a climbing goat with an arrow stuck in his neck. All the details of the amulet could suggest its imported Assyrian origin (P. Amiet) if not for the figure of a camel, a motif very rare in the glyptics of Mesopotamia but on the contrary widely spread in the art of Margiana and Bactria. On the whole, this amulet is a real masterpiece of ancient art and is believed to belong to some high priest. Inside one of the chambers on the western "altar ground" a steatite amulet was found with an image of a four-petal rosette on one side and a seated bull on the other.

The special purpose of the monument is also emphasized by the miniature columns (over 30 of them) that definitely had a cult meaning and were found only in the northern official section of the fortress (Fig. 20, Nos 1-12). And it was at Togolok-21 where such a large amount of these cult items was found for the first time. They are all carved out of different kinds of a marble-like stone in the shape of a small post up to 0.5 m high with a mirror-like polished surface. On their butt ends troughs are cut and one "miniature column" has preserved a "lid", also stone, with a trough on top. It is established that they are used in east Iran, single fragments from Elam and their second-hand use was determined by Amiet as an import from Anatolia (P. Amiet, 1986, fig. 97, pp. 101-104) in Afghanistan, southern areas of Central Asia and Baluchistan. It seems that the earliest miniature columns, dating to the third millennium B.C., were found in the Iranian Seistan on the Shahri Sokhta settlement. In the Afghanian Seistan, in Godari Shah (Fig. 20, No 13) in their second use there were discovered stone "weights" and miniature columns (Dales, 1972) in such large amounts that these finds can be compared only to the finds of Hissar and Togolok-21. It looks very possible that close to Godari Shah there was a temple very much the same as the one from Togolok-21 where they also used these items as cult objects. They were found on the surface of the site due to the natural erosion that uncovered the floors of the rooms.

The next group of cult items from Togolok-21 consists of small alabaster cylinders with tops beaten off and a groove in their base. Next to one cylinder there was found a steatite cone-base that could be used as a stem for the cylinder. Such two-pieced objects most likely had a cult purpose and their ground-off ends may indicate that they were used for various ritual grindings. Similar objects were found in the plundered tombs of south Bactria as well as in the Harappan settlements of the Indus Valley where they played some special role (Dales, 1984, p. 101-115).

On the floor of the room, adjacent to the large altar there was discovered a large multi-petalled rosette carved of dark steatite, which was most likely used as an emblem (Sarianidi, 1990, pl. XLVIII, I 13). A similar one, though appearing more official, was found in the plundered tombs of Bactria.

Of special interest is a marble bull's head that has already been described above. In general it resembles a bulla that is still used by Zoroastrians during the initiation procedure (Boyce, 1987). A golden bull's head from Altyn Depe is very representative in this respect, it also had insertable horns and holes for affixing them. V. Masson has absolutely correctly noted that in the temple of Altyn Depe where this head was discovered there were no female terracotta statuettes and that they had been replaced by other cult objects (V. Masson, 1981, p. 75). But we cannot rely on the conclusion reached by V. Masson on the basis of his correct statement. Impressed by the Mesopotamian lunar symbols, the author expressed an idea that the whole shrine as well as all its attributes (including the "weights" and miniature columns) were devoted to some astral deity. But it seems more likely that the whole set of these objects finds closer analogies with the items from the temple of Togolok-21 and that the golden head from Altyn Depe was also a scepter's top as was initially noted by I.N.Khlopin (Khlopin, 1981, p. 29). Additionally, this statement can be supported by the find of a small silver-plated nail that was next to the head and apparently used for fixing it to a rod. It is noteworthy that the whole complex of the Altyn Depe shrine sharply differs from the south Turkmenian ones while showing close similarities with those in Margiana. This is further evidence that the upper layers of Altyn Depe reflect the strong influence of the newcomer tribes that possibly were related to those that penetrated into Margiana in the beginning of the second millennium B.C. (Sarianidi, 1988, p. 62).

In the official section of Togolok-21 fortress, on the floors of its rooms there were found about ten broken cult vessels and some other partially preserved cult vessels. They were decorated by sculptured figures along the rims and were so fragile that it precludes their everyday use. The most representative among them is a vessel with five small vessels inside of it that was found at the Togolok-21 settlement (Sarianidi, 1980). The characteristic feature of all these vessels is that their rims are decorated with unique sculptured friezes that include human figures, birds and animals. Human beings occupy the central place among the figures of these friezes, as for example, two human figures standing next to each other, one of them carrying a baby on the breast, while the other with a bowed head has its arms behind its back. If our assumption that these cult vessels were used for the drinks of the haoma type is correct, we can say that the subject of these complex compositions is based on the myths about the sacred drink haoma (the Avesta) and soma (the Rigveda).

One myth from the Rigveda is especially interesting for our subject since it speaks about a plant of a soma type. This plant personifies a child of the Heavens and the Earth (Sarianidi, 1990, p. 148, fig. 33) that in their turn represent a male and female source. It is very tempting to imagine that the above described friezes on the cult vessels illustrated this myth. According to it Father-sky takes away from Mother-earth their common child in order to lift it into the heavens. On one of the cult vessels from Bactria there was depicted a figure of a man with an axe at his waist-line exactly as the God of thunder Parjanya is always depicted. This figure might personify the Father from the above described myth (Sarianidi, 1977, fig. 35).

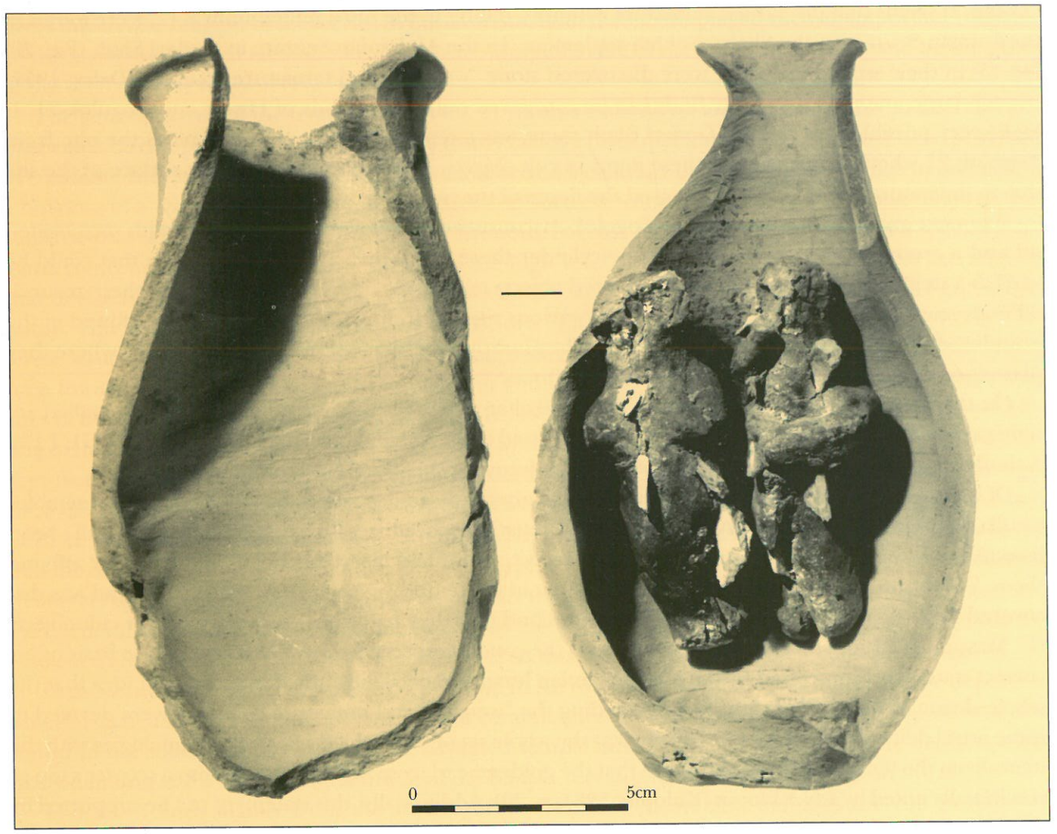


Fig. 50, No 1. Margiana. Togolok-21. Temple. Vessel with two statuettes inside.

Another vessel from the plundered tombs of south Bactria is equally representative. It depicts two human figures in a wrestling pose. It seems almost too natural to suppose that all these vessels represented different episodes of the same myth. And possibly it is not accidental that human figures on the cult vessels from Margiana are almost always shown with their arms outspread, as if in some wrestling posture.

Usually, the human figures on cult vessels have no sex signs except for one that was found in the room of Togolok-21. Inside of this vessel there were two figures that closely resemble the identical ones from the cult vessels (Fig. 50,No1). They clearly show that one of them is a man with a child on his breast and the other one is a female with her arms behind her back (Fig. 50, No 2). This find can be interpreted as an additional proof of our assumption that the friezes on cult vessels illustrate the myth from the Rigveda.

It seems that the presence of the fire cult and the cult of libation gives us every reason to qualify Togolok-21 as a proto-Zoroastrian temple of the Indo-Iranian, Aryan tribes. But such an assumption is in no way supported by the Avesta or Rigveda since no temple of any kind is mentioned in these two texts. In Bactria with its related tribes and similar religious ideas there were built temples with a totally different plan and other cult ceremonies. Thus, in Dashli-3 next to each other there are located two monumental buildings of a clearly public purpose. The plan of one of them, "the round temple", is based on the combination of a circle and a square. Though the general plan differs from that of Togolok-21, still one can trace some similarities in details, as for example the presence of special cellas.

In the central, clearly sacred, section of the "round temple" on specially built low brick platforms there were altars filled with ashes, which leaves no doubt that the main cult ceremonies were connected with fire. One might suppose that the whole temple was a temple of fire but this has to be proved by additional archaeological material.

The second monumental building on Dashli-3 has a totally different plan which is based on a rectangular courtyard filled with structures of various purposes. In spite of these cardinal differences here too we can notice some separate similar features. For example, in this north Afghanistan complex of Dashli-3 as well as in the Margiana complex of Togolok-21 one can find chambers on both sides of their corridors (Sarianidi, 1977, fig. 15). To our mind these are the similarities in details that testify to the fundamental relationship between the architecture of Bactria and Margiana. Therefore the principal differences in the architecture of these two areas witness their different religious and functional purposes that provided for cult ceremonies.

In spite of the intriguing mystery of these Bactrian temples some outstanding scholars such as B. Brentjes, K. Jettmar, A. Parpola qualify them as belonging to the Indo-Iranians (Jettmar, 1981, pp. 220-227; Brentjes, 1981, pp. 12-15; Parpola, 1985, p. 76). The "round temple" being defined as a fire temple, the character of

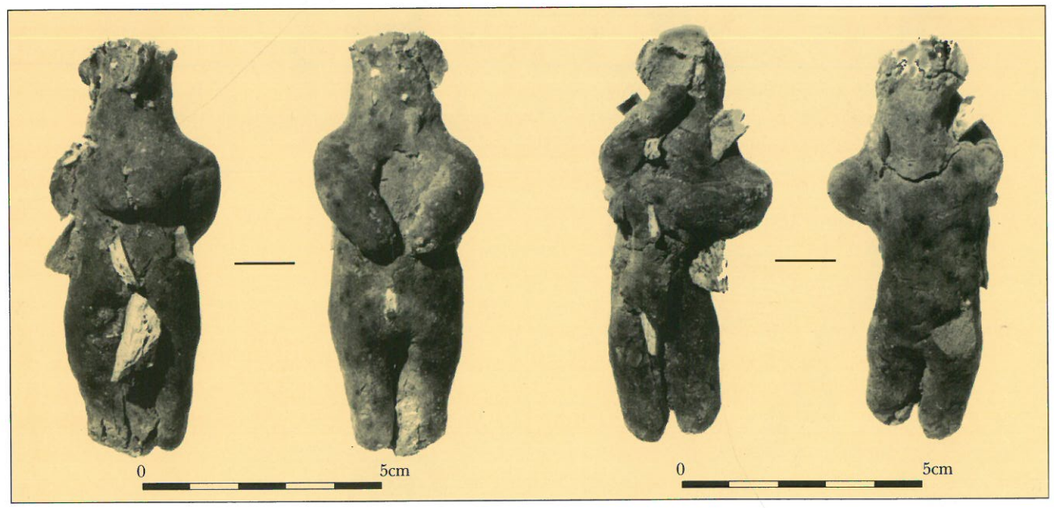


Fig. 50, No 2. Margiana. Two statuettes from the vessel.

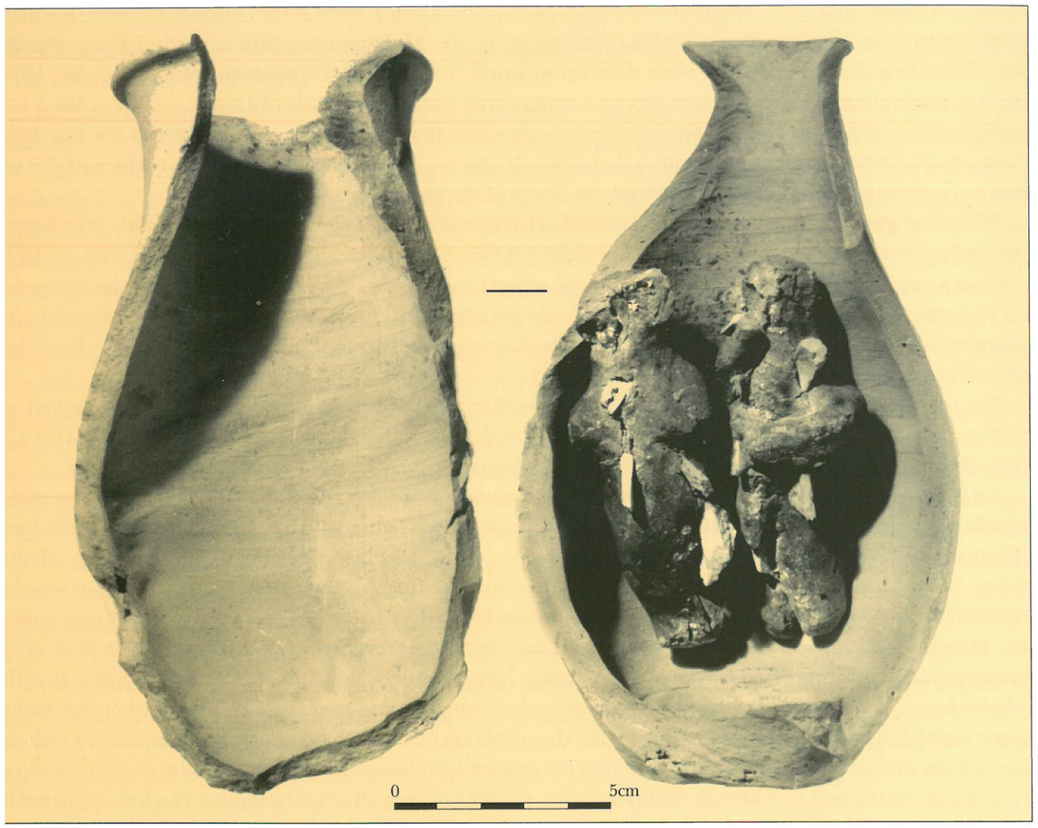
the second monument from Dashli-3 still awaits its definition. In the first publications it was identified as a palace and cult complex (Sarianidi, 1977, p. 150) and B. Brentjes referred to it as a mandala of the Indo-Iranians. Later G.Pugachenkova suggested classifying it as a temple, but dedicated to some other deity.

Regardless of the solution to this problem, it is already clear that in the second millennium B.C. in Bactria and Margiana there were temples where cults of fire and libations played the leading role. It is noteworthy, that both these cults, though slightly changed, are found in the Zoroastrian religion.

The Togolok-1 Temple. At the edge of Togolok-1 there was located a rather large settlement and to its southeast in 1974 on the surface of a small elevation a cult vessel was found. This was an indirect evidence of a ritual building that once existed there (Fig. 51).

The 1987-1988 excavations completely confirmed this assumption. On a low (up to 0.5 m high) natural elevation a building of a clearly cult purpose was built, with various functions belonging to three chronological periods. In the first, main period, a brick wall encircled a sacred area of the whole complex in the manner of "a fort" (Fig. 52). In the second period, when the complex began gradually to decline, inside the walls on its open area (but not in the fort), private dwellings for the ordinary inhabitants of the settlement were erected (Fig. 53). Finally, in the third period when the complex ceased to perform its original functions, a small necropolis was built over the ruins for the needs of the nearby settlements. It is natural to assume that within these three main periods there existed some stages that are not yet clearly defined.

Standard sun-baked brick (44 (42) x 24 (22) x 14 (12) cm) with clay bonding was used for the construction of the complex. The walls of the rooms were badly preserved and in some cases the floors are found on the surface of the site. Sometimes the bad preservation of walls makes it impossible to find the passages into the rooms.



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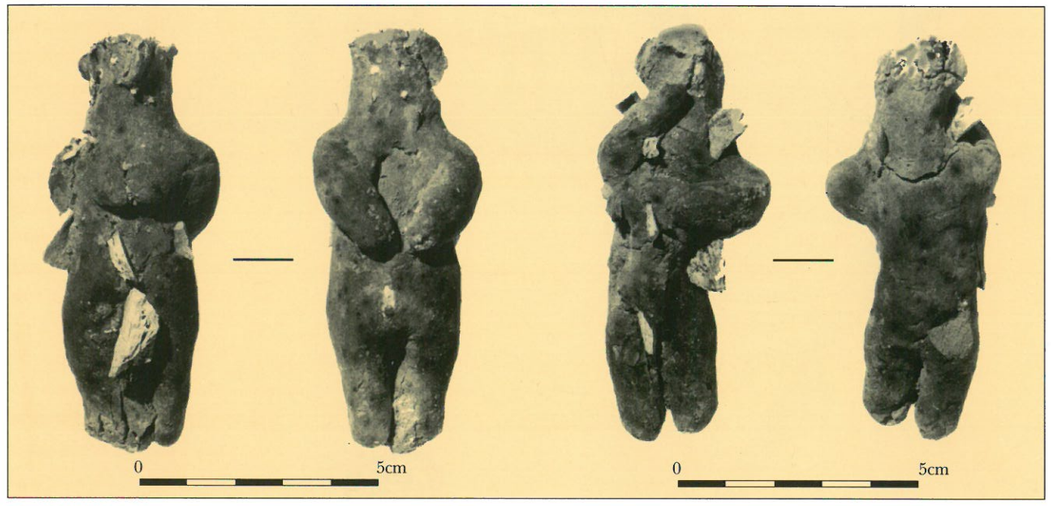

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Regardless of the solution to this problem, it is already clear that in the second millennium B.C. in Bactria and Margiana there were temples where cults of fire and libations played the leading role. It is noteworthy, that both these cults, though slightly changed, are found in the Zoroastrian religion.

The Togolok-1 Temple. At the edge of Togolok-1 there was located a rather large settlement and to its southeast in 1974 on the surface of a small elevation a cult vessel was found. This was an indirect evidence of a ritual building that once existed there (Fig. 51).

The 1987-1988 excavations completely confirmed this assumption. On a low (up to 0.5 m high) natural elevation a building of a clearly cult purpose was built, with various functions belonging to three chronological periods. In the first, main period, a brick wall encircled a sacred area of the whole complex in the manner of "a fort" (Fig. 52). In the second period, when the complex began gradually to decline, inside the walls on its open area (but not in the fort), private dwellings for the ordinary inhabitants of the settlement were erected (Fig. 53). Finally, in the third period when the complex ceased to perform its original functions, a small necropolis was built over the ruins for the needs of the nearby settlements. It is natural to assume that within these three main periods there existed some stages that are not yet clearly defined.

Standard sun-baked brick (44 (42) x 24 (22) x 14 (12) cm) with clay bonding was used for the construction of the complex. The walls of the rooms were badly preserved and in some cases the floors are found on the surface of the site. Sometimes the bad preservation of walls makes it impossible to find the passages into the rooms.

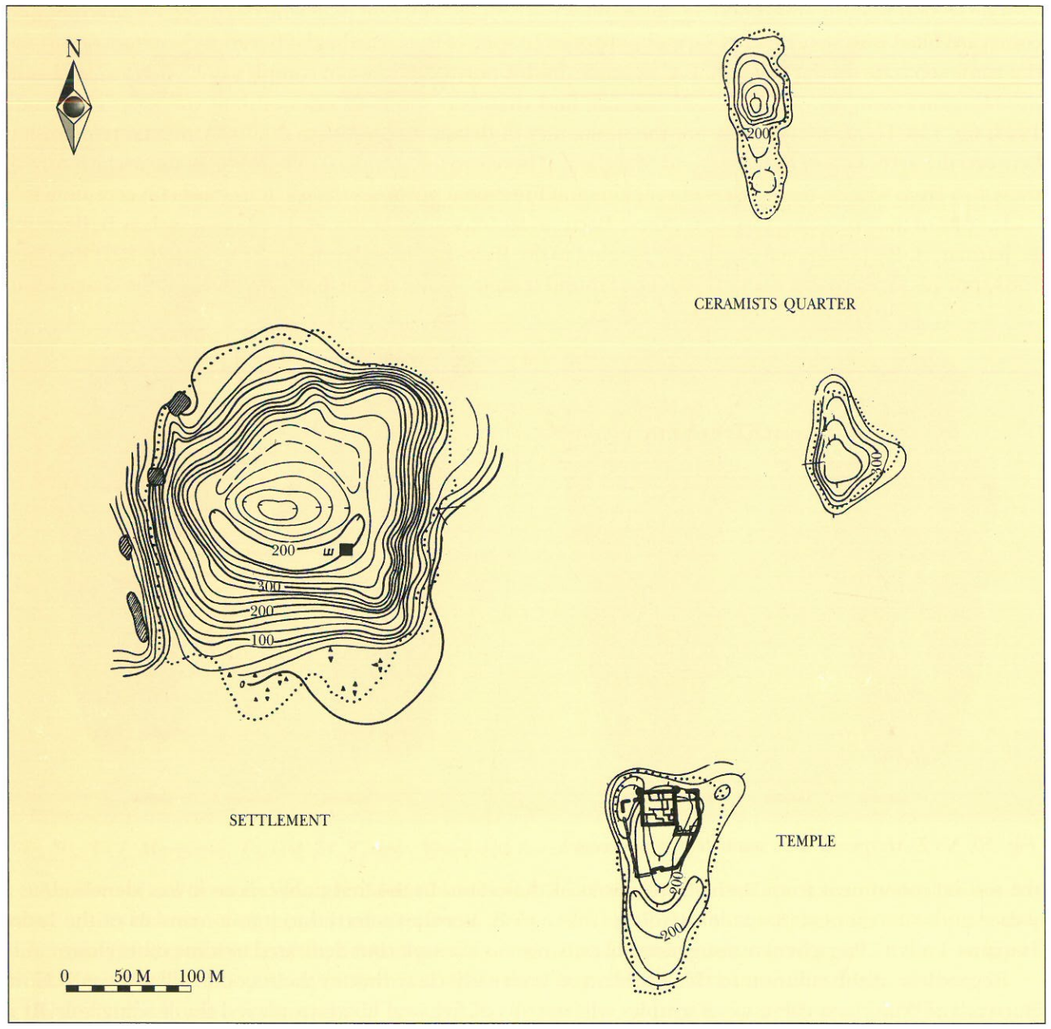


Fig. 51. Margiana. Togolok-1. Temple. Situation plan.

Thus, the central section of the complex is occupied by an almost square "fortress" with surrounding walls and its three sides are strengthened by supports (Fig. 52). The surrounding walls of the fortress being built on the virgin soil, the supports were erected above thin, fragmentary layers of garbage, which testifies to the fact that these supports were built after the construction of the main walls. The fortress was re-enforced by only two round towers along the northern facade which opened outwards and protruded beyond the surrounding wall of the complex. The southern facade being inside the surrounding wall did not need any towers. Only in the very last period when the outer wall was destroyed a southwest tower, only partially preserved, was built above the accumulated cultural layers.

The fortress together with the surrounding walls was built at the same time according to a single plan and all the buildings are strictly located within its perimeter. The entrance to the fortress was not found but the depression in the microrelief suggests that it was located in the northern wall, which was almost fully destroyed by the time of excavation.

The central place in the layout of the fortress belongs to an inner courtyard (room 50) with centrally located passages on all four sides. To the south and east of the courtyard are two surrounding corridors and on

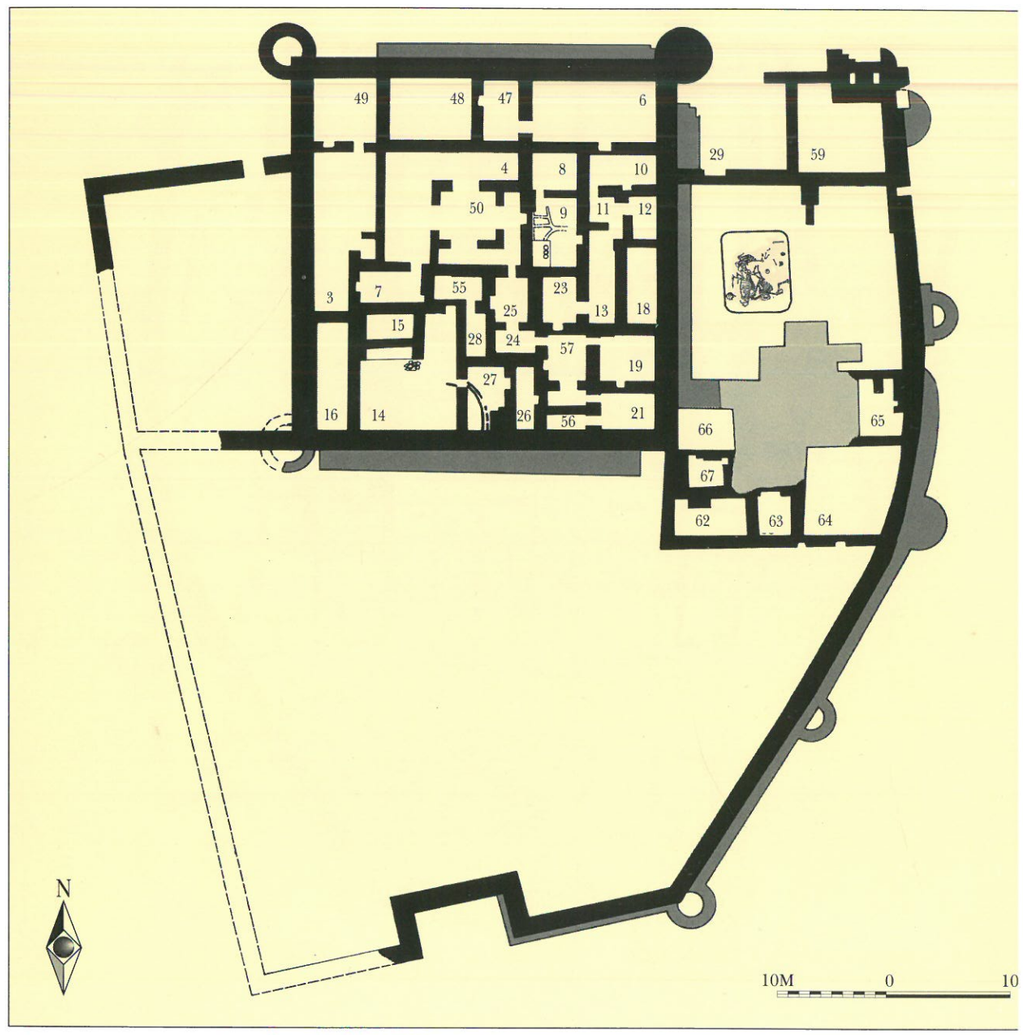
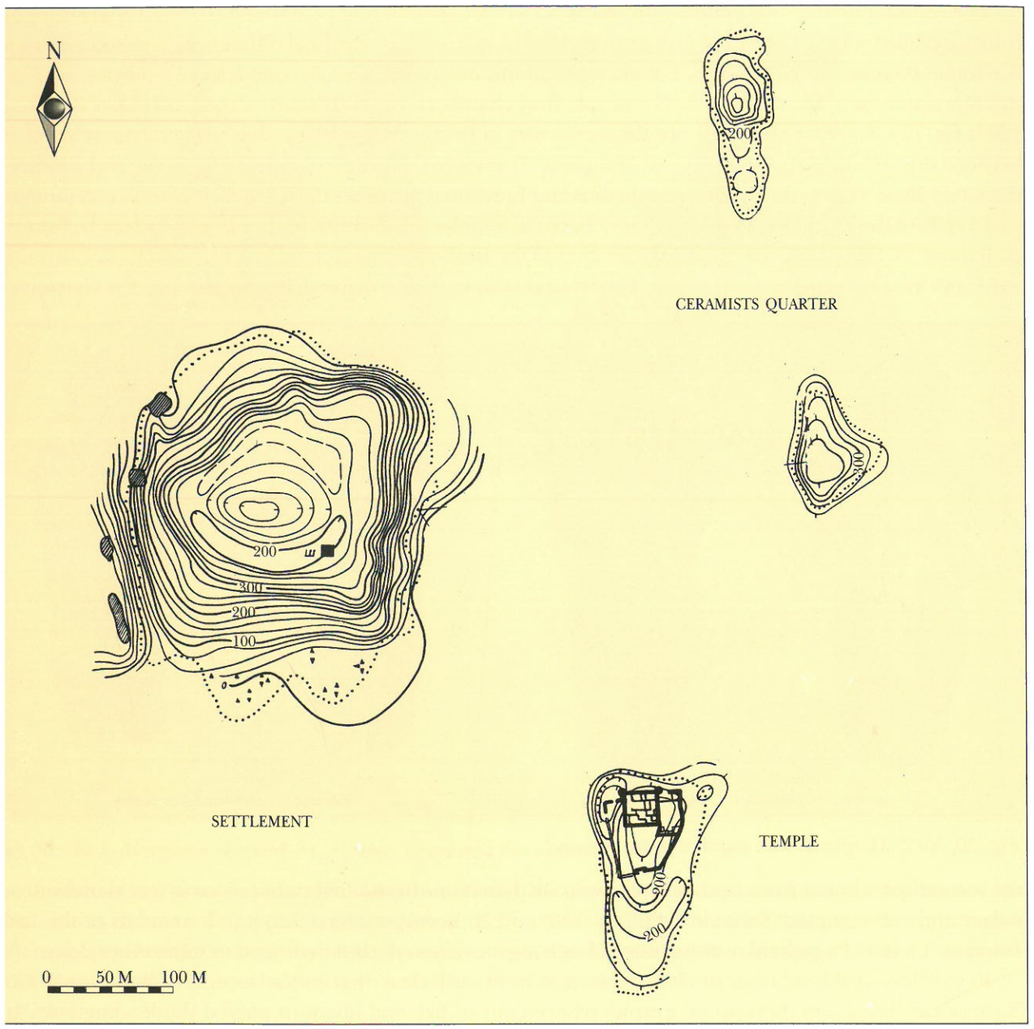


Fig. 52. Margiana. Togolok-1. Temple. Plan of the first, early period.

the north and west, room 4 plays the role of corridors. On the whole, this courtyard reminds the "cover courtyard" at Togolok-21, its walls and floor have traces of white gypsum plaster that is evidence that once courtyard had a cover. At the end of the first period a small brick platform and a wall were built inside room thus forming room 5. To the north of the "covered courtyard" is a chain of four large rectangular rooms (N 6, 47-49). They recall Togolok-21, but their purpose is still unclear. Probably it is not at all accidental that th all have two layers of plaster, the earlier one being the usual clay plaster and the second one a white gypsu layer. By the time of excavations all these rooms were capped with a layer of brick, apparently in the very l period of the existence of the temple, a situation that is characteristic of the rooms which had special purpos

To the east of the "covered courtyard" there is a group of rooms (8-13, 18, 23) that are interlinked passages forming a separate microblock. The purpose of room 9, "white room", is absolutely clear, since its southwestern corner a special brick platform was built with the base of large vessels buried in it and fragment of a strainer was found there (Fig. 37, No 2). Troughs laid on the inside with thick gypsum pl ter start from the platform and are scattered across the floor. This resembles room 34 from Togolok-1 which was associated with the preparation of haoma type drinks.



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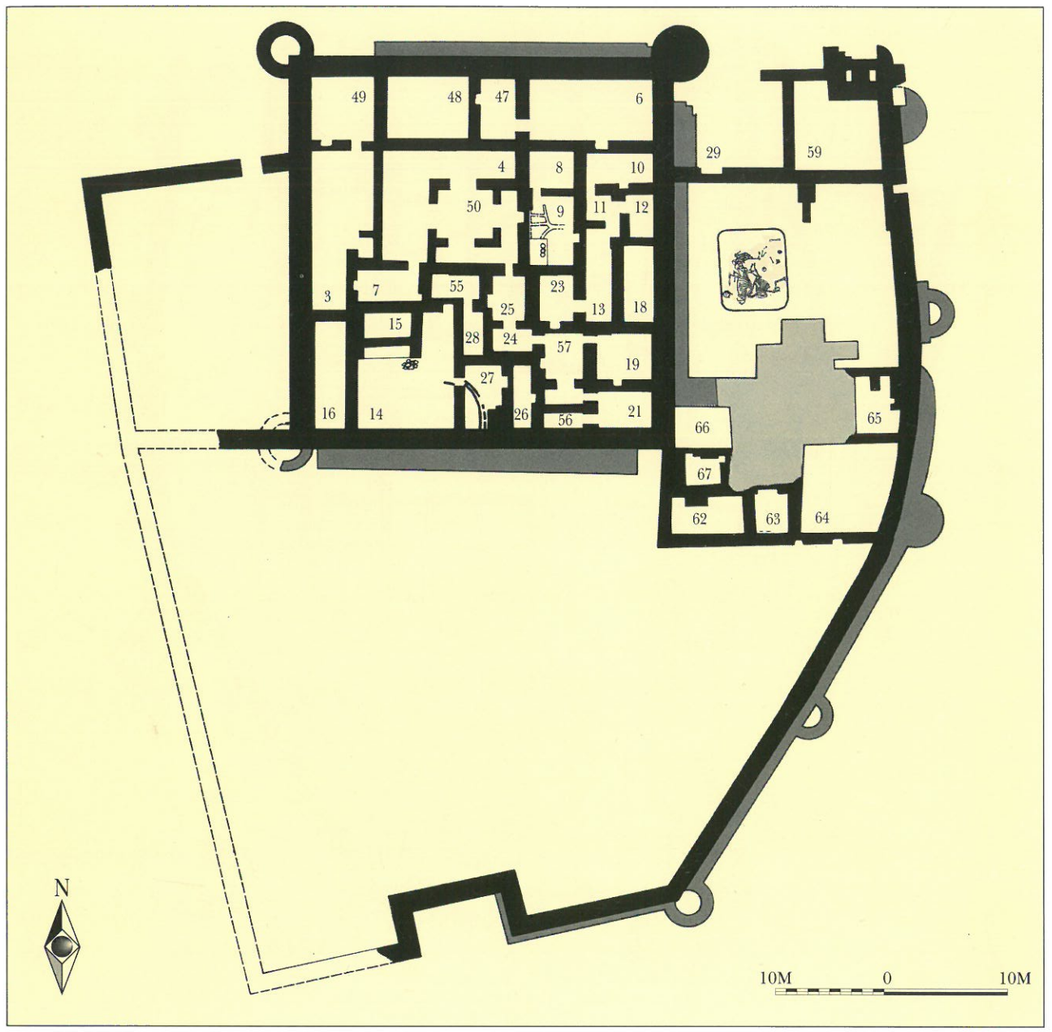

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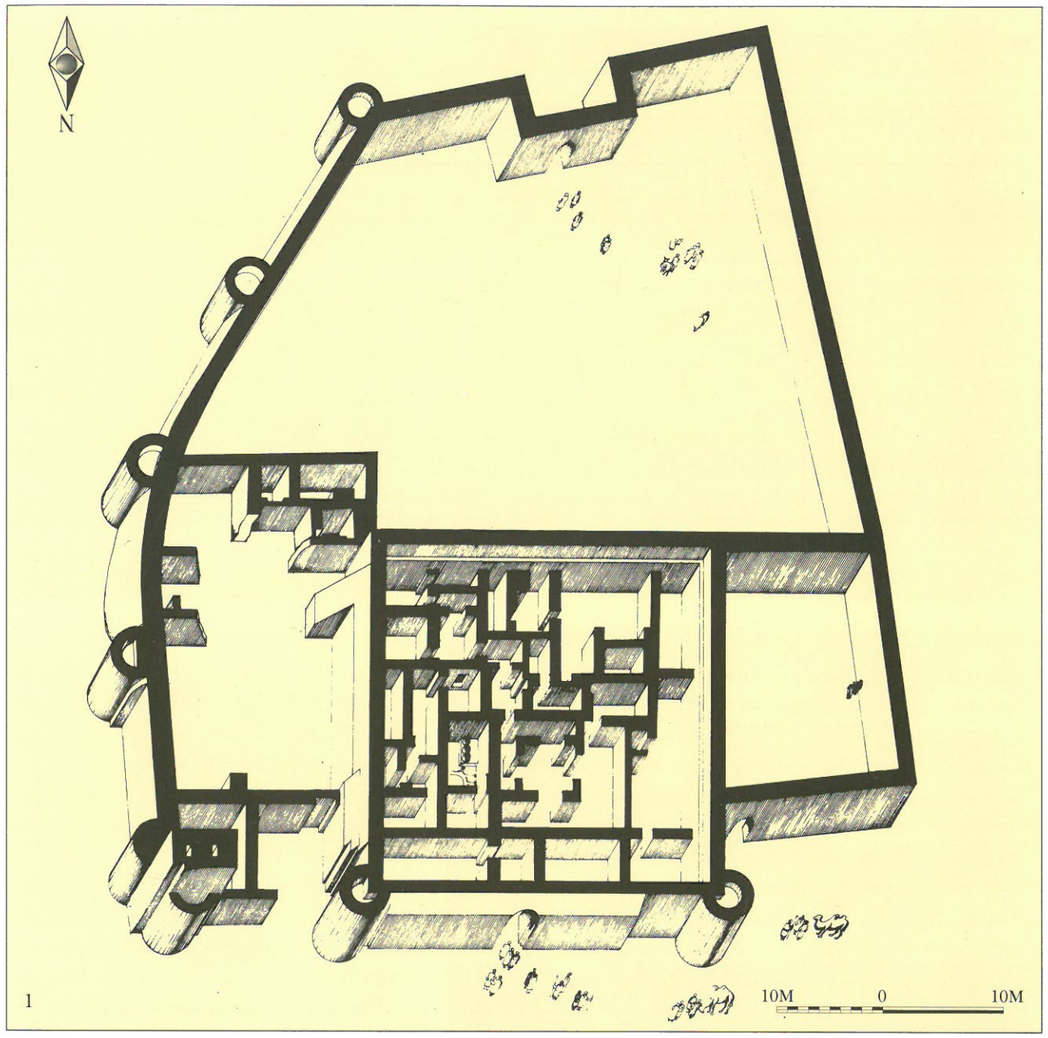
Fig. 53. Margiana. Togolok-1. Temple. Plan of the second, late period.

Three rooms, 14, 22 and 24 stand out among the rooms to the south of the "covered courtyard". Room 14 was a large one of a courtyard type and was carefully capped with bricks. Probably in the second stage, on the elevation in the middle of the courtyard, a special stand was built from the pieces of brick slag. A trough inclines in the south direction from the stand and is also made of fragments of ceramic slag. The trough curves smoothly and cuts through the neighbouring room 27 and crosses underneath the surrounding wall and flows outside. Here we are dealing with a special structure with a drainage system similar to that of the "inner courtyard" (room 23) from Togolok-21. The drainage system makes it possible to believe that the structures were associated with the ceremonies of sacrifice. Rooms 22 and 24 have a similar layout: in their south section there were built T-shaped platforms covered with gypsum plaster, no higher than 10-15 cm above the floor level. Both these rooms recall rooms 8 and 36 at Togolok 21 and were possibly used as a sort of shrine with cellas. These rooms or cellas from Togolok-21 and Togolok-1 find extremely close parallels in the round temple of Dashli-3 (Afghanistan) in its rooms 2 and 3 that make up the sacred part of the whole temple. Besides the similar plan, this close resemblance is also traced in the presence of pits in the floor that were filled with coals and burnt animal bones.



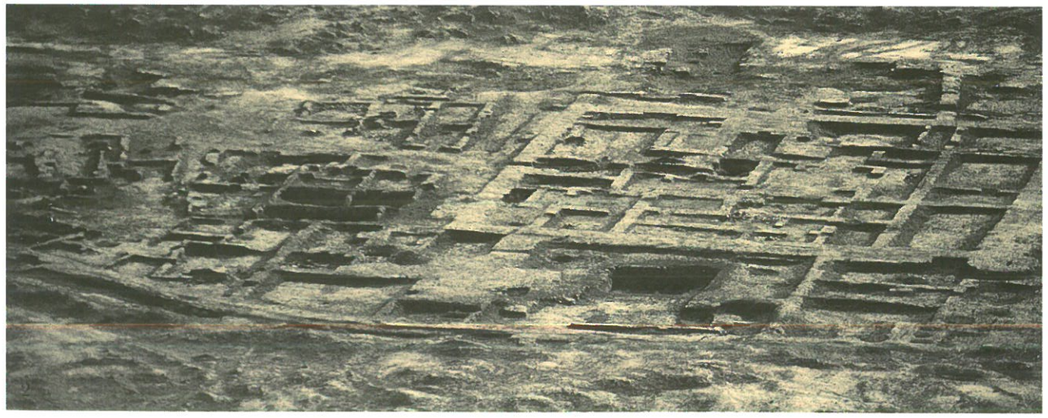


Fig. 54. Margiana. Togolok-1. Temple. Axonometry by V. Antonov (1). Aerial view (2).

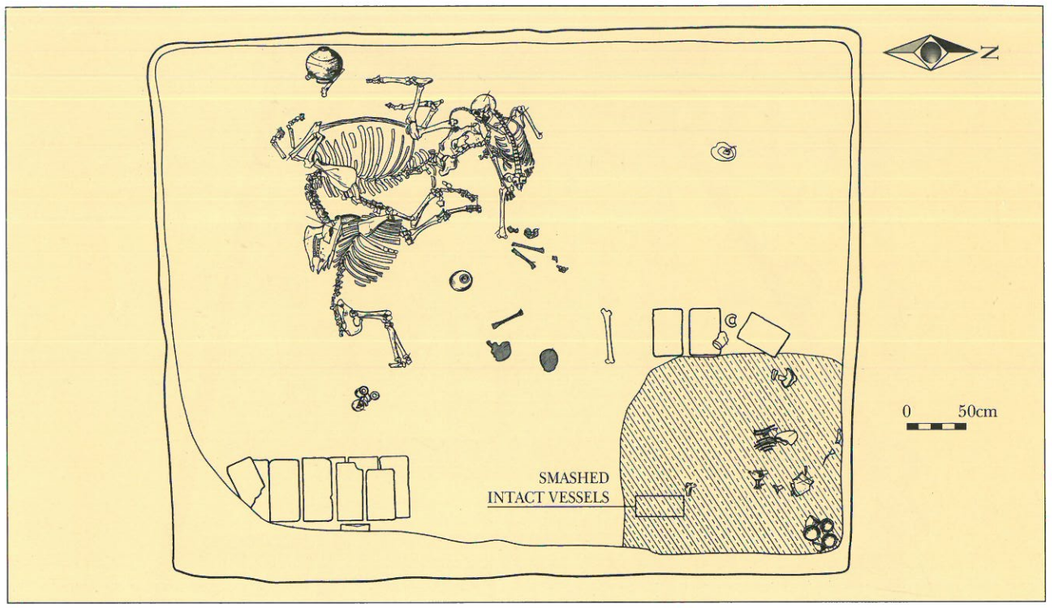
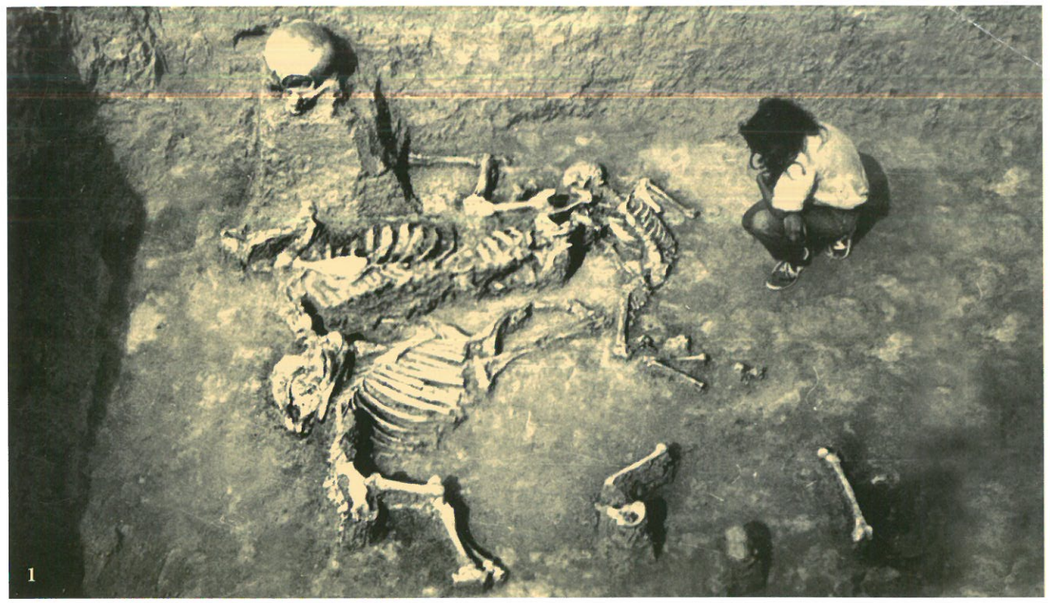


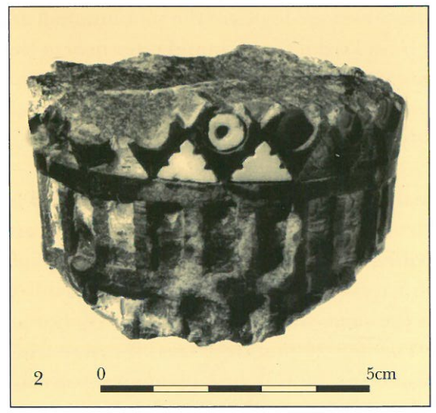
Fig. 55. Margiana. Togolok-1. Temple. Priestess burial.

As it has already been mentioned, the fortress is encompassed by a surrounding wall that serves at the same time as the outer edge of the whole complex. As in the fortress, the outer wall rests on the virgin soil but later in the second stage, on its outer eastern plane, there was built a sort of a casement in the manner of an additional wall apparently strengthened by towers of the main wall. On its south side the surrounding wall has a projection of a round form and possibly once this was an entrance to the inner open-air square of the whole complex. Originally, inside the surrounding walls the buildings were located in the eastern section, the rest of the section remaining vacant (Fig. 52).

By the time of excavations the eastern rooms were practically completely destroyed due to natural erosion, a situation that does not permit us to determine their initial destination (Fig. 53). Altogether there are sound reasons to believe that the whole eastern section of the complex played a special role in the general plan of Togolok-1. It is clearly seen that from the very beginning this section was very well kept; they cleaned it and did not allow the formation of cultural layers, as is the case on the rest of the square inside the walls. Here the cultural layer is represented by clean wind-blown and laminated layers.

Already in the first period, above this wind-blown and laminated layer 20-25 cm high, a complete brick floor was built and at the same time, a tomb was cut. This tomb belonged to a priest, or, which seems more likely, to a priestess (Fig. 55). The tomb looks like a very large burial pit (5.5 x 4.5 m and 1.5 m deep) cut into the virgin soil. The deceased was buried in the northern area of the tomb, most likely brick lined, and the burial offerings, besides many other things, included two ritual vessels and a stone (black steatite) "miniature column" that was richly inlaid by figure inserts of white stone. In the opposite corner of the burial pit there was a "pyramid" of over a hundred intact vessels of three main forms: bell-shaped goblets, simple vases and vases on high stands. After the dead was buried a driver with two bulls descended by the brick steps in the other corner of the burial pit. The driver was killed even before the bulls were sacrificed : he is lying on the ground in an unnatural pose with his arms bent behind his back. After the interment, the burial pit was filled with the same dug- out earth. At a height of about 0.5 m above the bulls they placed an average sized vessel, a bull's femur (?) and a copper "strainer" (Fig. 23, No 5) that clearly resembles one from western areas (Mitchell, 1988, pl. 157, I 3). The cult vessels found among the burial offerings add to our assumption that the "strainer" was used for the preparation of the





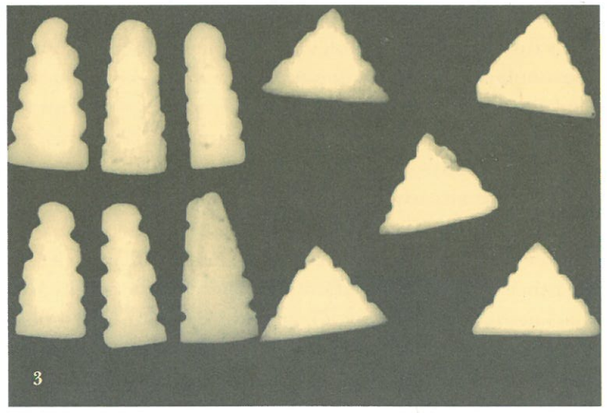


Fig. 56. Margiana. Togolok-1. Temple. Priestess burial. General view of tomb (1). Fragment of the "miniature column" (2) and incrustations (3) of it.

beverage of the haoma type. All together, the "strainer", the vessel and the cattle femur witness that they had a certain symbolic meaning. Soon thereafter, the tomb was plundered and it seems that the robbers knew very well the location of the main burial since their entrance was made precisely in the northern section of the pit. Now it is difficult to determine the exact set of burial offerings but there is no doubt that initially the "miniature column" was intact (Fig. 56, No 2). Over 100 incrustation pieces (Fig. 56, No 3) were found next to the column that has preserved about 20 holes from the former inlays. From the scattered bones of the main burial, an anthropologist O. Babakov has concluded that it was the corpse of a young woman about 20-25 years old. Near the robbers' entrance there were found two cult vessels and single figures from the sculptural friezes (Fig. 10, No 2). The cult vessels and the "miniature column" most likely testify that this burial belonged to a priest or priestess who served the temple rather than to a civil person. The high status of the dead is also confirmed by the inlaid "miniature column" since it represents a rare example of an object of this kind that was found only in Tepe Hissar (Schmidt, 1937, pl. LXI) and in the plundered graves of Bactria (Pottier, 1984, pl. XXXIV, no. 288). Both, human sacrifice

and the sacrificed bulls that accompanied the main interment most probably demonstrate the situation wherein the local population entered the stage of a class society. It seems that in neighbouring Bactria the situation was the same.

To summarize, the excavations at Togolok-1 have clearly shown that the fortress encircled by a wide wall was the center of the whole complex. The whole inner square was open and free of any structures except for the eastern area that probably played an auxiliary role in regard to the central fortress. The latter was probably associated with the preparation of some intoxicating drink and cult libations, this being proved (besides room 9) also by the general set of finds inside the fortress that includes "miniature columns", fragments of ritual vessels and bone tubes with engraved images of human eyes. Unfortunately, the western part of the complex was badly preserved but its microrelief does not suggest the existence of any large buildings there. At the end of our review it should be added that the temple was located on the descending slope of the natural elevation and that the area to the south of it stands almost 0.5 m higher.

In fact, the Togolok-1 temple may be regarded as a diminished, peripheral copy of the "cathedral church" from Togolok-21. In both cases the central part of the complex is occupied by a fortress that at Togolok-21 is encircled by two walls and at Togolok-1 by one surrounding wall. Both fortresses have a centrally located "covered courtyard" that in fact represents a very well known type of "a corridor-encircled courtyard", the type that earlier was known only in ancient architecture. We have already mentioned the special rooms associated with the preparation of intoxicating drinks, as well as cellas and places for sacrifice. And finally, in both instances, the central plan consists of official and household sections with one formal difference, that at Togolok-21 both sections are located inside the fortress, while at Togolok-1 the household buildings are found to the east of the fortress.

Similar to Togolok-21, the rural temple of Togolok-1 finds its closest analogies in the monumental architecture of Bactria. Besides the buildings with a cult purpose from Dashli-3, we should refer now to the fire temple of Djarkutan in north Bactria. No direct analogies are traced between the general plans of the Margiana and Bactria temples; we can speak only about the complex of stable architectural features and building plans that in different combinations are repeated in the monumental buildings of these areas (Sarianidi, 1994).

We have already discussed the cellas (sometimes with small pits in the floor) that were found at Togolok-21 and Togolok-1 on the one hand and in the round temple of Dashli-3 on the other. There are no cellas in Djarkutan but, as in Margiana, its plan is clearly divided into two parts: one being official and the other —for household use. Narrow chambers-cells are characteristic both for the Bactrian (Dashli-3, Djarkutan) and Margiana (Togolok-21, Gonur-1) temples. In the same way the "winery" of Djarkutan has some parallels with room 9 at Togolok-1 and room 34 at Togolok-21 that were used for preparing haoma-soma drink, while the "metallurgical shops" of Djarkutan can be in a way compared with the chambers severely burnt inside that were located on the "square with platforms" at Togolok-21.

None of the Bactrian cult structures repeats the Margiana temples and moreover even in Bactria itself they all principally differ one from another. Their plans lead us to suggest the existence of at least three types of temples in Bactria, two of which (the round temples in Dashli and Djarkutan) were associated with the rites connected with fire. But even in this case they reveal a principally different plan that indirectly may indicate different forms of cult ceremonies.

Another picture is seen in Margiana. Both monumental buildings have a cult purpose and in spite of their different status (Togolok-21 being a "cathedral church", Togolok-1 —a "rural church") they are associated with a common cult —the preparation of an intoxicating drink of the haoma type. If this is not an accident then there is every reason to believe that in the ancient country of Margush there existed temples associated first of all with the cult of libations and independent fire temples— and the cult of fire played a secondary role compared to the libations cult.

Things are different in Bactria. The round temple in Dashli-3 as well as Djarkutan was first of all associated with the fire cult, though the finds of cult vessels in the plundered burials of south Bactria (Askarov et. al. 1988) lead us to think that the cults of intoxicating drinks and ritual libations were also familiar to the local population.

The Temenos of Gonur. It becomes clear now that the large settlement of Gonur was the capital of the ancient land of Margush and consisted of two unequal parts: the settlement (north Gonur) and the temenos, or sacred part (south Gonur) (Fig. 57). The temenos was possibly built some time later than the settlement but both parts comprise one complex of the Late Bronze Age. The temenos was built on a small natural elevation and its outer surrounding walls had the outline of a parallelogram based on the virgin soil. Inside the walls were made of "pakhsa" (beaten up clay) while the outside course consists of three rows of sun-baked bricks. Both courses of the walls were carefully covered with clay plaster that contained small pieces of straw. We cannot exactly explain the unusual shape of the temenos in the form of a parallelogram but assume that it most likely depended on the microrelief of the elevation on which it was built.

The excavations have shown that prior to the construction of the temenos this natural platform was

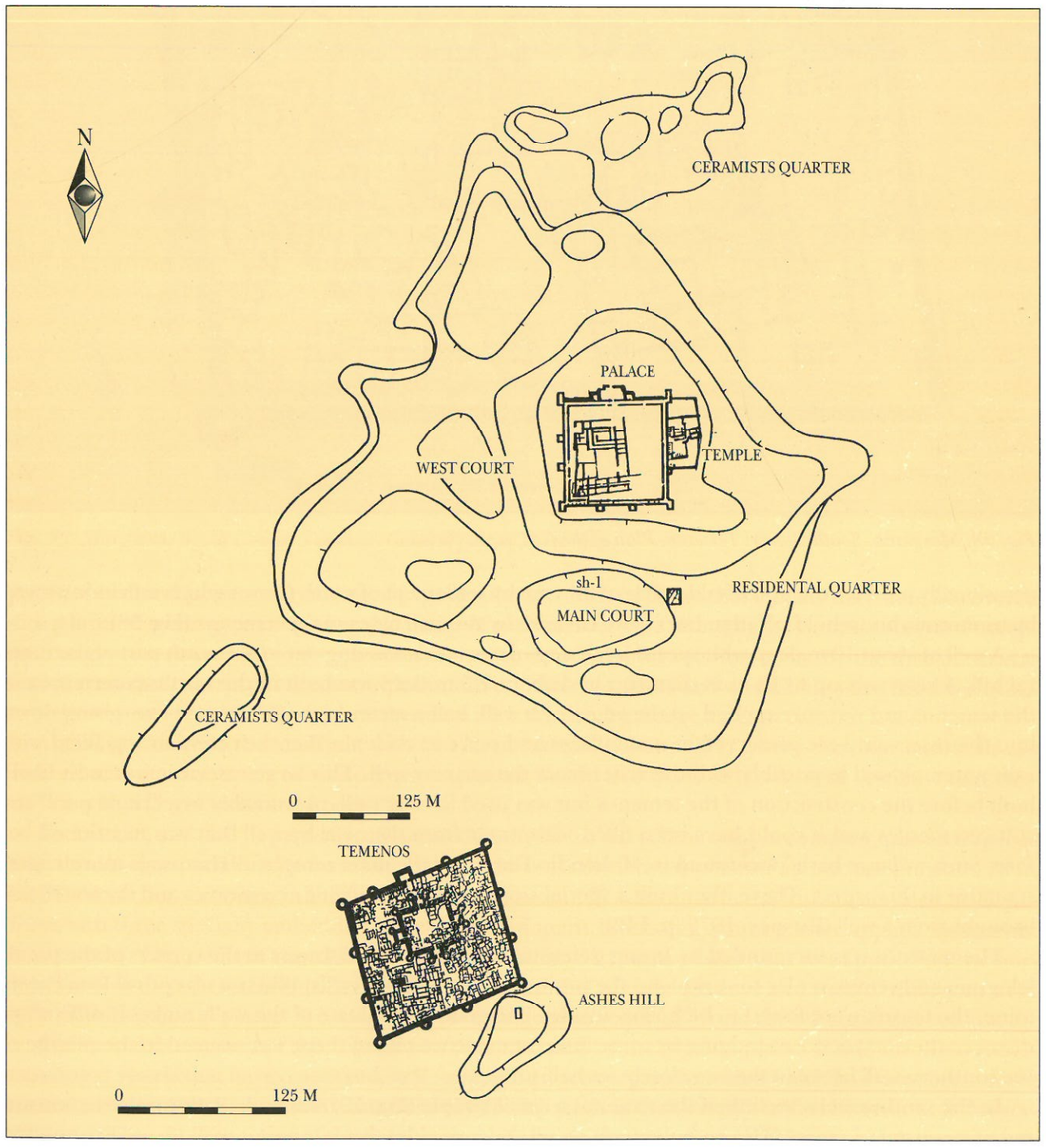


Fig. 57. Margiana. Gonur. Situation plan.

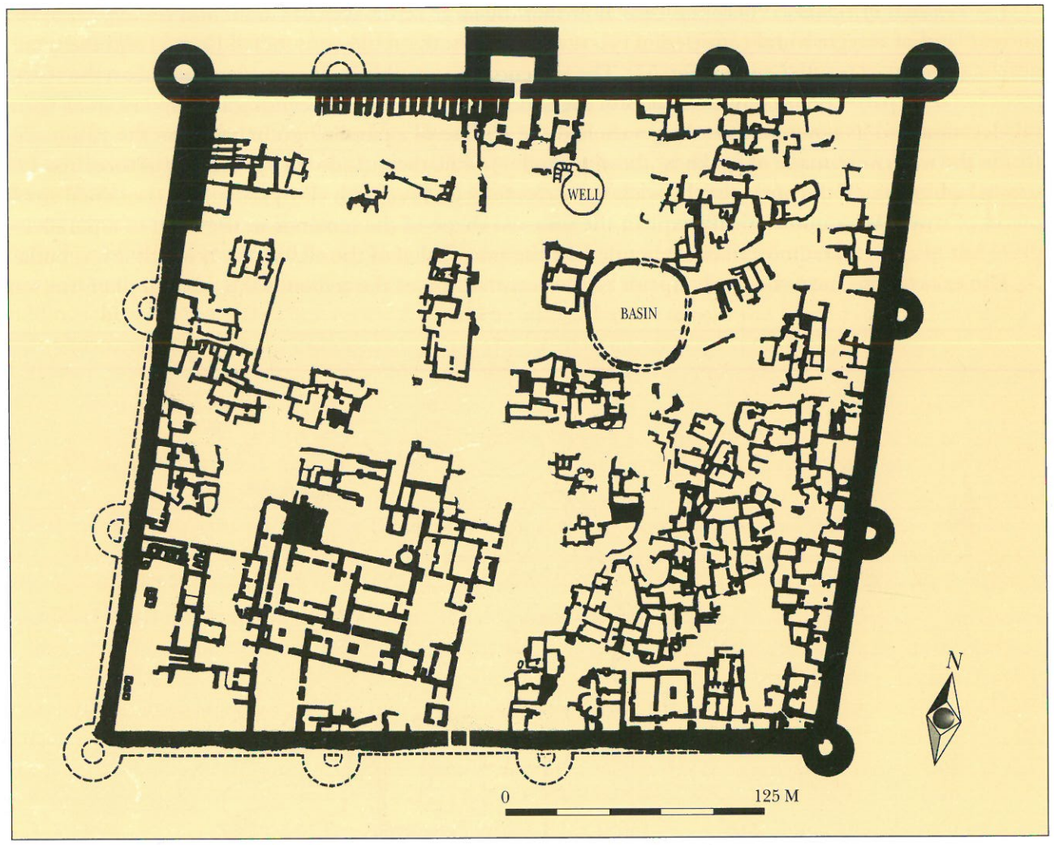


Fig. 58. Margiana. South Gonur. Temenos. Plan of the first, main period.

occasionally used for the household needs of the nearby settlement of north Gonur which is demonstrated by numerous household pits that later were covered by the wall bases of the temenos (Fig. 58).

A well of about 10 m deep with special brick steps downwards was dug out in the north part of the natural hill. A reservoir up to 18 m in diameter and about 2.5 m deep was built in the north-eastern area of the temenos and was surrounded on the edges by a wall, half a meter high. Shallow grooves going down into the reservoir were preserved in some places and serve as evidence that the reservoir was filled with rain water, as well as possibly with the water from the near-by well. This large reservoir was most likely built before the construction of the temenos but was used later as well, presumably as a "ritual pool" for cult ceremonies and it could have been filled with water from the near-by well that was mentioned before. Such a "large bath" was found in Mohendjo Daro, but the main temple in Hattusa is more representative in this aspect. There, they built a special stone pool for the ritual ceremonies and the water was brought from a well (Burney, 1972, p. 142).

The temenos was surrounded by strong defensive walls with round towers at the corners of the parallelogram and semi-circular towers along the perimeter of the outer walls. When it was possible to determine, the towers were found to be hollow inside. The general bad state of the walls makes it difficult to discover the entrances but judging by some indirect evidence one of them was situated in the middle of the southern wall between the two closely set half-towers.

In the southwestern section of the temenos a small temple (Fig. 59) was built, its central area consisting of a courtyard (room 221) with passages on all the four sides that connect it with three surrounding corridors (rooms 209, 210 and 225) and with a sort of a vestibule (rooms 202 and 204). The corridors and

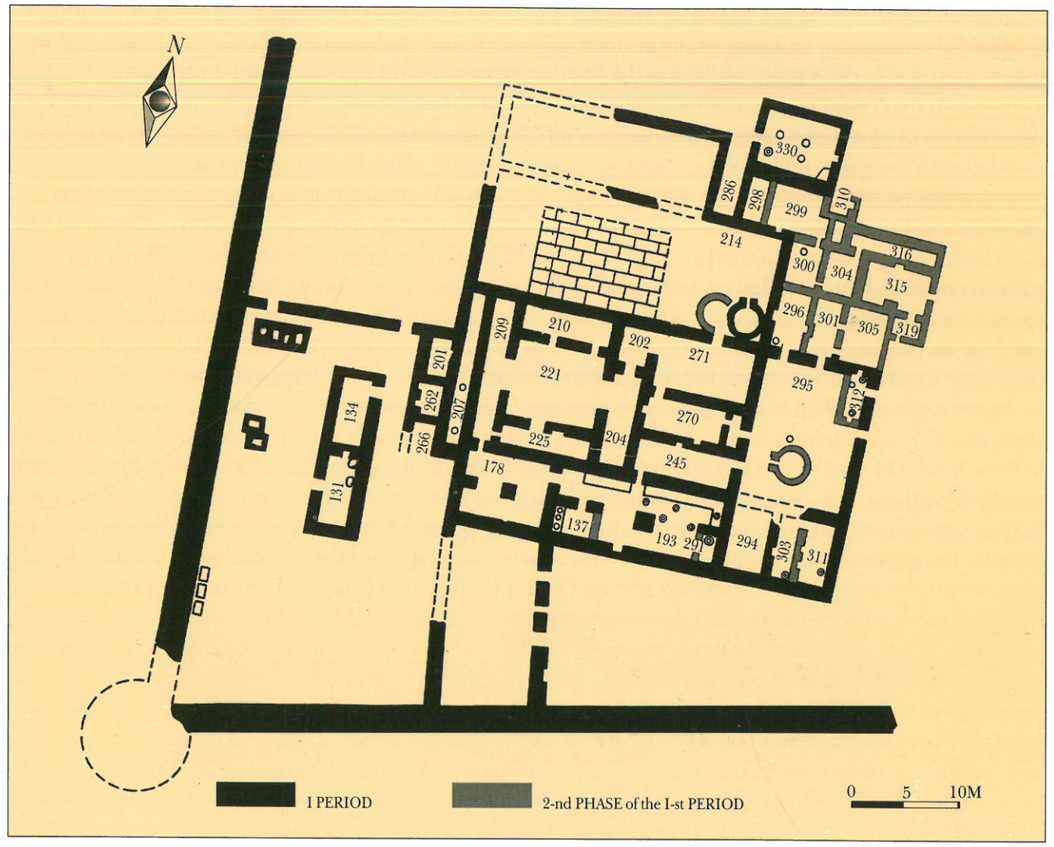


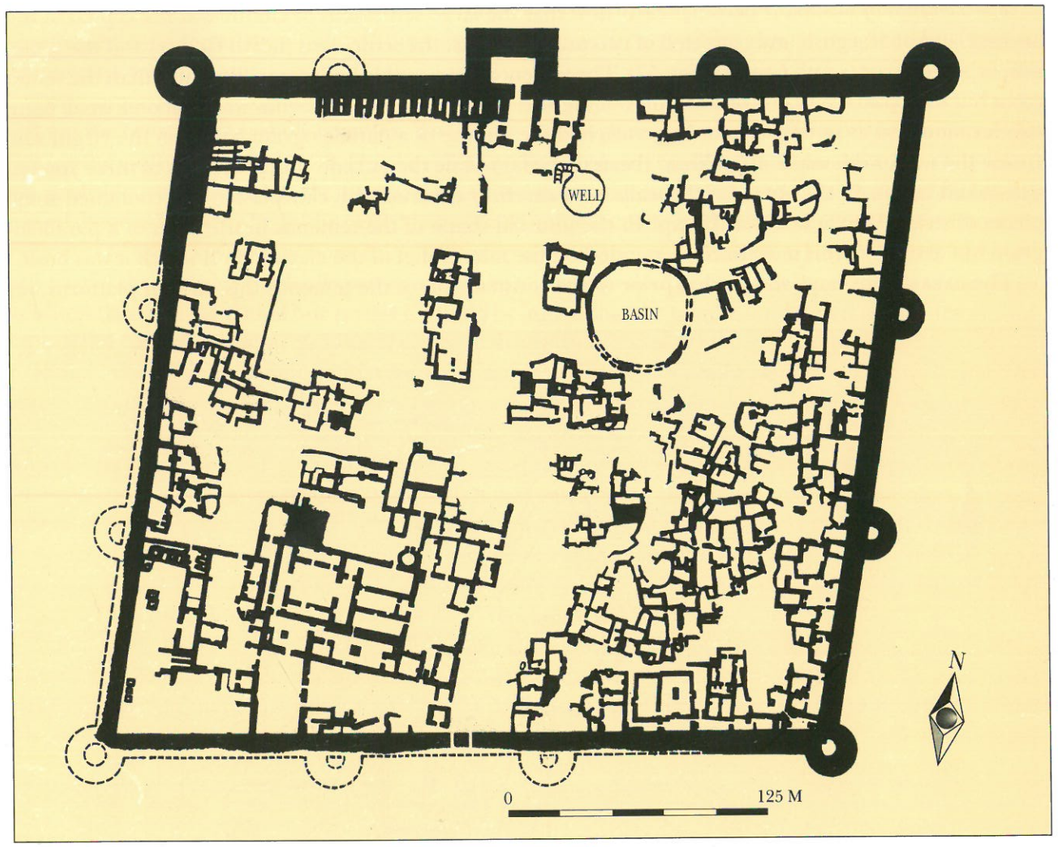
Fig. 59. Margiana. South Gonur. Temenos. General plan of the temple.

the vestibule have preserved remains of gypsum plaster which indicates that initially they were all covered with a layer of white gypsum plaster. No traces of such plaster were found in the central courtyard except for fine gypsum flakes and so the question of the courtyard interior remains open. By the time of excavations the central courtyard together with the surrounding corridors and a vestibule were filled with constructional waste of brick fragments rather than with the usual garbage and ash cultural layer.

A passage connects the vestibule with two large rooms (270 and 271) where the floor and walls are covered with several layers of white gypsum plaster. Room 270 likewise has a small vestibule that connects it with a large courtyard (room 295).

Rooms 178, 193 and in part 137, all situated in the south part of the temple complex, played a special role, this being especially true for room 193 with its centrally located pillar of an unclear purpose. In its southwest corner sometime in the first, main stage, room 137 was constructed with an elevated brick podium with three specially embedded vessels that had many layers of gypsum plaster applied to their inner surfaces. The podium was also covered with a layer of gypsum plaster that was applied on the bordered wall in three broad bands. It remains to be noted that initially the floor and walls of this room were covered with gypsum plaster, a condition that distinguishes room 137 from the others in this section.

The special destination of this room is also demonstrated by the gypsum plaster inside the three abovementioned vessels that have conserved, as it were, the ancient organic remains which had once been in the vessels and first of all the numerous impressions of hemp seeds as they were identified by Prof. N. R. Meyer-Melikyan. The whole complex of the data obtained leaves no doubt that room 137 was used to prepare hallucinogenic beverages, reminding us of the similar rooms, or the so called "white rooms" from the temples



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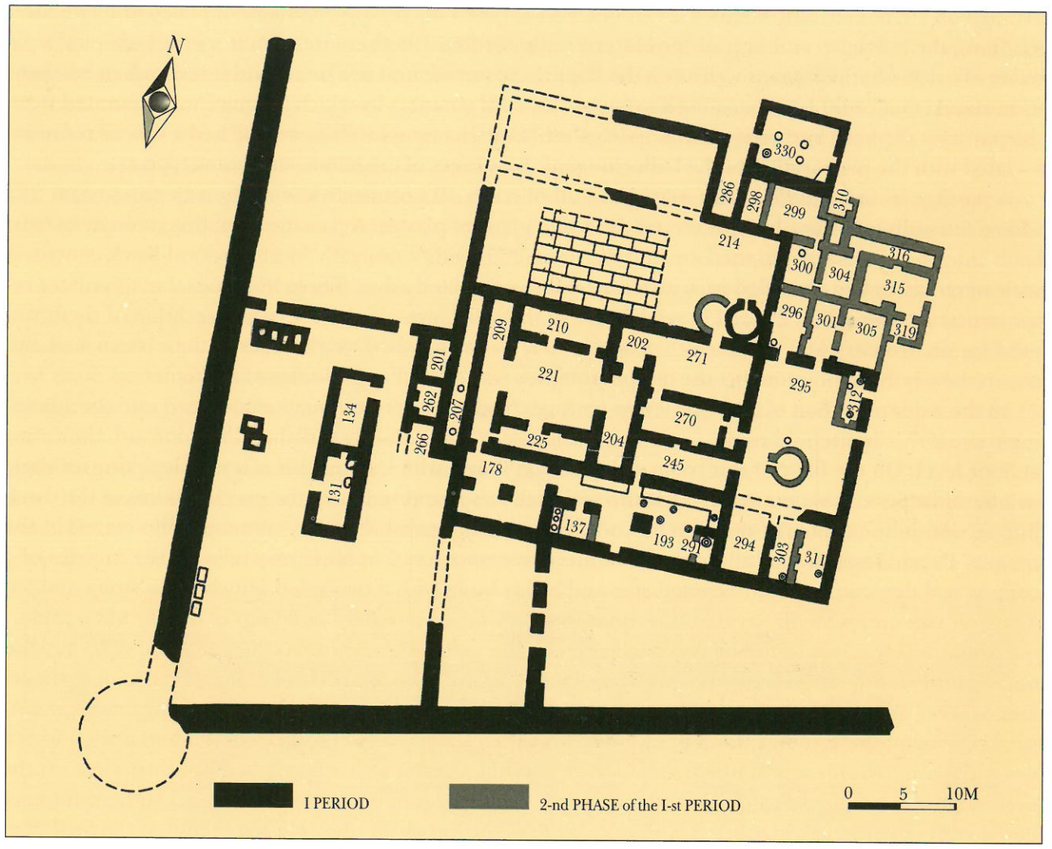

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The special destination of this room is also demonstrated by the gypsum plaster inside the three abovementioned vessels that have conserved, as it were, the ancient organic remains which had once been in the vessels and first of all the numerous impressions of hemp seeds as they were identified by Prof. N. R. Meyer-Melikyan. The whole complex of the data obtained leaves no doubt that room 137 was used to prepare hallucinogenic beverages, reminding us of the similar rooms, or the so called "white rooms" from the temples

of Togolok-1 (room 9) and Togolok-21 (room 34) with their microscopic remains of pollen and ephedra.

Along the northern and part of the eastern walls of room 193 there were built special sofa-platforms made of brick. On the sofas as well as on the floor there were found five intact and three broken earthenware stands that could have been used to support special strainers by which the juice was separated from the particles of plants and seeds. Thus, as in other Margiana temples this one also had a special room associated with the preparation of the hallucinogenic beverages of the haoma and soma type.

A passage in the middle of the northern wall of room 193 connects it with the adjoining room 245 where the walls and floor had preserved the white gypsum plaster. A passage from this room in its turn leads into the already mentioned courtyard (room 295) with a centrally located round brick container with an entrance that was filled up with clean white, compacted ashes. Three buildings that were later reconstructed (rooms 294, 303, 311) are located in the south area of the courtyard and one of them was used for an ordinary kiln and the other one for day to day needs. Two passages in the eastern wall and two in the northern one connect the temple complex with the other buildings of the temenos.

In the western section of the temple two passages from the surrounding corridor lead into the adjoining room 207, a household room, where two basins were found deeply sunk into the floor with their rims at floor level. On the floor of this room a clay lid was found with the imprint of a seal depicting an eagle in a heraldic pose. It is noteworthy that the seal itself was found in one of the private rooms of the dwelling section in the center of the temenos, which probably was inhabited by someone who served in the temple. In addition, in the same room 207 there was uncovered another clay lid with the imprint of a copper seal depicting a multi-beamed star and a clay bulla with a two-sided imprint of a stone amulet. Thus, we can undoubtedly say that this room was one of the household buildings of the former temple.

Room 207 was connected by two passages with the neighbouring rooms 208, 262 and 266 that also had a household purpose and were partly destroyed by the time of excavations. In this section of the temenos there are two adjoining rooms 131 and 134 that stand out from the rest by framing a large courtyard. In one of these rooms was a brick platform with a shallow vessel immured in it and coated with a layer of plaster with traces of hemp seeds. Next to it was a vessel with an inscribed hunting scene. At the same time one has to indicate that both, "the bath" with gypsum plaster and the vessel with graffito are dated not to the first, main, period in the existance of the microcomplex in question but to the final one.

In the northern and southern sections of the courtyard deep in the virgin soil are placed round, rectangular and square chambers coated inside by brick that bore traces of fire. The indirect data give us the right to suppose that these both chambers (131 and 134) originally had the height not more than 0.5 m That means that they were opened on the top, thus being similar to some degree to the ones mentioned above at the western altar ground of the temple Togolok-21. There is also a resemblance in the joint location of the fire altars near these chambers. Probably, (like the modern Zoroastrians) the ancient Margians believed that the special enclosed "clean places", a type of p a v i, were the places, where the gods were seated and the fire was burnt in their honour in the altars situated by them. Finally, like the similar chambers of the Togolok-21 temple, these sacred structures of the temenos were carefully locked with bricks that was practiced only for the religious constructions.

All these archaeological data show, that in the southwestern corner of the temple complex of the temenos there was a sort of an altar square that was purposely separated from the rest of the structures by walls with passages through the northern wall of the complex. And though there is some evidence that hallucinogenic drinks were prepared there (room 131), one could believe that the fire cult played the main role in this section of the temple.

Another courtyard that was connected with the central area by a common passage between rooms 271 and 214 was located to the north of the just described main part of the temple. In the middle of this courtyard is a badly preserved brick platform and two round containers built at different times. They are the same type as the ones in the first courtyard (room 295) and are also filled with a layer of white compacted ashes.

The other rooms in the north section of the temple were partly destroyed already in ancient times and above their ruins new buildings were erected with their wall bases resting on thin cultural layers that had accumulated by that time. It should be noted that the buildings of this section differ from the house-

hold buildings in their correct, regular plan and most likely they also belong to the temple but to a later stage in the history of the existence of the whole complex. This assumption is proved by the room 330 where on the floor and the wall of its corners a gypsum plaster with imprints of hemp seeds has been preserved as well as a ceramic stand used during the straining of a juice from stalks and seeds. It seems that this room was most likely used for preparation of the hallucinogenic juice and that this assumption is based on the whole complex of finds.

The temple complex under investigation did not preserve a clear northern border since the rooms of this section were destroyed and partly cut down during the later construction of a monumental building conventionally called a "fort" (Fig. 60). The remaining part of the temenos was mainly occupied by private buildings of a dwelling and household purpose, they were grouped around the inner courtyards. This part of the temenos consists of a number of rather isolated and independent microcomplexes that were formed with the help of narrow streets, side streets and simply unbuilt areas. Not all the wall bases of these buildings rest on the virgin soil. Some rooms were built later during the period when, on the originally open and unbuilt area in the frames of the first, main stage there had accumulated thin (5–7 cm thick on the average) layers of debris. In isolated cases two or three walls may rest on the virgin soil while the rest —on the rubbish and ashy layers (Fig. 60).

The available data make it possible to suggest that these dwelling complexes were used by the ordinary inhabitants who served the needs of the temple described above. This assumption is based on the generally careless character of construction of these houses with thin slanting walls and a large number of storage

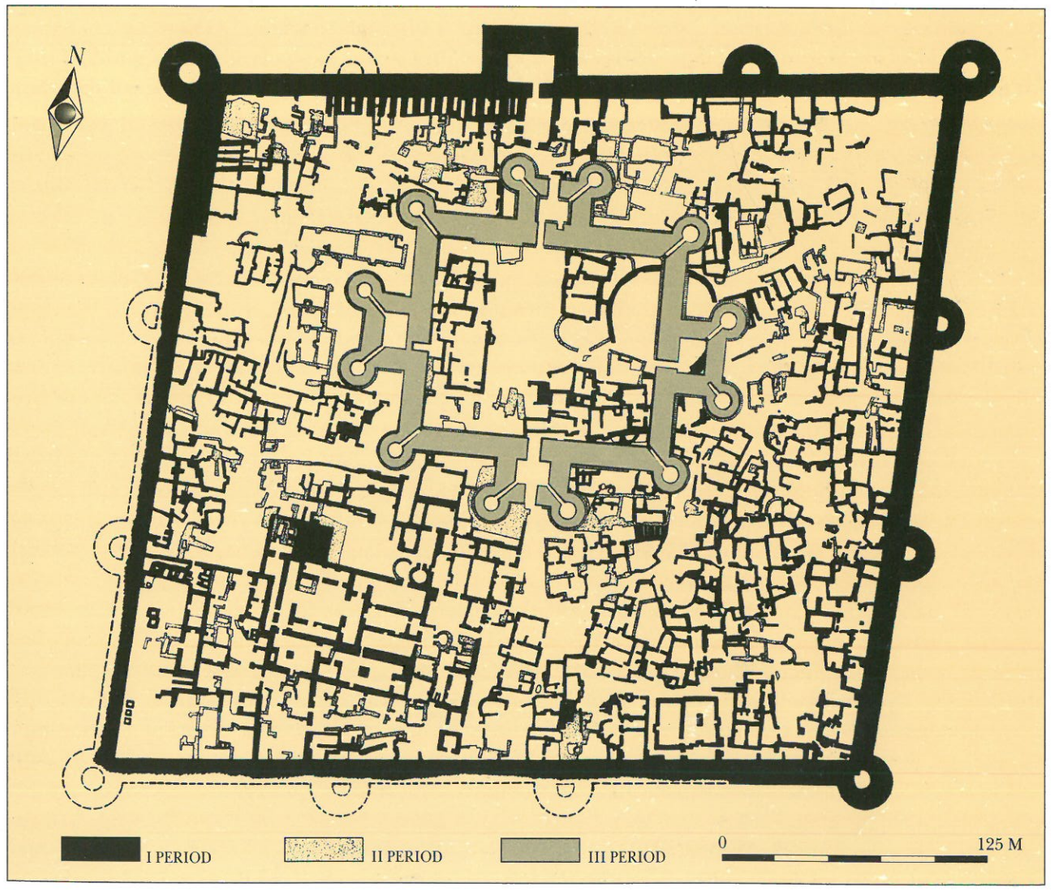


Fig. 60. Margiana. South Gonur. Temenos and Fort.

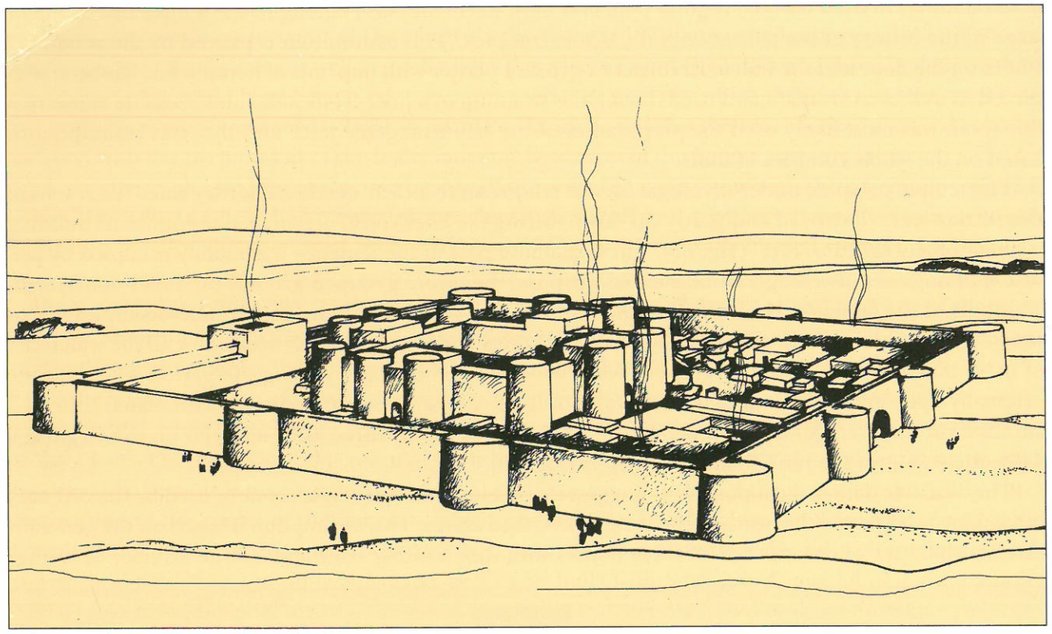


Fig. 61, No 1. Margiana. South Gonur. Temenos. Reconstruction by V. Antonov.

rooms, larders and different other rooms of an auxiliary nature. Dwelling as well as household rooms with domestic hearths for both heating and cooking leave no doubt as to the domestic purpose of these rooms. On the whole, this section differs greatly from the architecture of the temple described above and undoubtedly represents typical construction for common settlements in Margiana (Fig. 61, No 1-2).

The assumption that the people who lived in these houses were connected with the activity of the temple is supported by the special rooms that have corners with brick platforms which encase small vessels plastered in with clay. Sometimes there are cups deeply sunk in the base of these "baths" that were covered inside by many layers of gypsum plaster that then continued on the adjoining walls. All these "small baths" as a rule were located in the corners of the rooms and they all contain hemp remains (identified on the spot by Prof. N. R. Meyer-Melikian). This leaves no doubt that they were used for the preliminary soaking of plants that were later used for the preparation of the juice of the haoma type.

A similar picture is true for the ensuing second period when the existing microcomplexes were partly rebuilt and new buildings were erected with the foundations of their walls standing on thick (over half a meter) layers of debris and sometimes on the ruins of the walls of the first period. In the second stage, dwelling and household buildings with heating and cooking hearths as well as store rooms were constructed. It should be noted that in the excavations of the second period as well as in the first one there were discovered buildings that contained rooms whose corners had gypsum basins with hemp remains. If one takes into consideration that excavations of various sections have yielded over 20 such shallow vessels ("small baths") for the whole period of the existence of the temenos, then it becomes clear that the inhabitants of the temenos were engaged in serving the needs of the temple that was located in its southwestern corner.

A special place in the temenos belongs to the so called "tower complex". It consists of a rectangular "tower" projecting far from the line of the northern wall with the rooms adjoining it. Through room 75 the "tower" was connected with these rooms. In the northwestern corner of room 75 is a special niche covered with white plaster where a small head of clay painted white was found. The head had red lips and eyes painted black. It is likely that initially a clay statue was placed in this niche. Nearby in the stone debris, a bone tube with engraved eyes was found, an object well known from similar finds from the temples of Togolok-21 and Togolok-1 and which were presumably used during the ritual libations.

In the next room, number 90, along its northern wall, there was a partly preserved brick platform with a shallow vessel immured in it and coated with white gypsum plaster. There probably had been three vessels of this kind, which generally recalls room 137 of the temple considered above. It should be added that here too the walls were all covered with gypsum plaster. At the bottom of the intact vessel a steatite amulet was found with an engraved image of some plant. The gypsum plaster has preserved hemp remains, both these facts serve as evidence that the room was used for preparing hallucinogenic drinks.

In the second stage of development of the site, a square brick construction with "flutes" was placed inside room 90 that has a partly destroyed platform-podium with vessels immured in it. The purpose of the construction remains unclear. On the floor stone grinders and pestles were found alongside a chert "scepter".

The passage from this room leads into room 500 that contains on its floor a small pithos, next to it three stone grinders, half of a "miniature column" and an intact handmade vessel of the Andronovo type (Fig. 11, No 6). Room 76 has a passage outwards but the buildings that were once located there were completely destroyed in ancient times. It remains to add, that before being abandoned, these rooms were carefully capped by a layer of bricks to prevent any possible violation.

That there was a general cult purpose for the so-called "tower complex" seems to be a most acceptable interpretation. It should be noted that towers projecting beyond the line of the exterior wall were also found in the temple in Djarkutan and in Kutlug Tepe in Bactria where they possibly played a similar special role (Askarov, 1988, fig. 1; Sarianidi, 1977, fig. 55).

The architecture of the so-called fort that is located in the center of the temenos is of special interest. The foundations of the walls of this monumental building stand on the cut down walls of the first period as well as on the thick layers of debris which had accumulated by the time that the fort was constructed. This building was in the shape of a cross with towers at its twelve corners. The towers are all hollow inside and each has a special narrow passage. The fort was built on friable layers of debris rather than on the

Fig. 61, No 2. Margiana. South Gonur. Temenos. Aerial view.

virgin soil and in order to make the building strong the lower layer of bricks was placed with some inclination inwards forming a sort of a narrow stand. Unfortunately the construction of the fort was not completed, this fact being substantiated by the presence of the rubbish layers that were found on top of one of the towers at the level of three rows of brick. Moreover, the plan of the rooms inside the fort corresponds to the previous period since the foundations of their walls stand on the virgin soil while the bases of the fort walls rest on their ruins. A large inner courtyard surrounded by buildings of dwelling and household purpose with ordinary hearths were excavated within the fort and belonged to an earlier period. It was on the floor of one of these rooms that the above-mentioned copper seal with an image of an eagle was found while an imprint from it was discovered on a clay lid in the household room 207 of the temple. This is further evidence that the people of this microcomplex were directly involved in serving the temple and its economy from the very start of its operation.

The problem of chronological correlation in the construction of the fort and the above-mentioned temple is rather complicated. It is difficult to define whether they belonged to the same period of time or whether the fort was built after the temple was abandoned. The western wall of the fort lines up with the buildings of the second period as if in an integrated design with its tower. This design leads to the assumption that the fort had been built by this period of time. On the other hand, as has already been mentioned, the fort was constructed over the ruins of the buildings of the first period that made up the northern section of the temple complex. Thus, the impression is given that the fort was built after the temple, but by the time of the construction of the microcomplex of the second period at the western line, the building of the fort had been started.

The problem of the synchronization between the temple and the fort is of central importance, since possibly the fort was meant to continue the cult traditions of the temple at the period of the desolation of the temple. This would mean then that the temenos continued to play its role of a cult center. In any case, the central location of the fort in the territory of the temenos makes it possible to look at it as an unfinished temple. As additional proof of this theory we can consider the fire temple in Tepe Nush-i-Jan in Media. Of all known monumental buildings of the Near East its general cross-shaped plan with corner towers shows the closest parallels with the outer lines of the fort of the Gonur temenos (Stronach, Roaf, 1978).

At present, three temples are known in Margiana that have one general plan, that is a centrally located courtyard surrounded by corridors. Indeed, it is not at all accidental that in the center of all these temples is a courtyard with passages leading to the surrounding corridors (one of which may be a vestibule, judging by its dimensions). In spite of the close similarity in the cultures of Bactria and Margiana, this plan principle is so far not traced in the monumental architecture of Bactria (Dashli-3, Djarkutan). But all of a sudden it is found in the construction of monumental buildings in Syria. Best of all it is represented by the Mari palace where a large courtyard on the three sides is surrounded by narrow corridors that are divided by diametrical partitions, the fourth has a vestibule. By common passages the corridors and the vestibule are connected with the courtyard. The similarity with the Margiana temples is traced even in details: for example, each of the vestibules in the palace of Mari and in the Gonur temenos has an additional side compartment (Sarianidi, 1994, fig. 5). It also should be noted that in the Margiana temples, "white rooms" connected with the preparation of the hallucinogenic beverages were located next to these centrally positioned courtyards. This plan finds some parallels with the palace from Mari. Moreover, in room 5 of the Mari palace a platform-podium with small pits specially made at its base was excavated. It was covered with bitumen that is continued then in the adjoining room in the way of wide bands rather than in a complete plaster, thus vividly recalling the similar case in room 137 of the Gonur temenos (Sarianidi, 1994, fig. 6).

The planning principle of a "courtyard surrounded by corridors" is traced not only in the Mari palace, that dates back to the third millennium B.C. but also in a still earlier building of Habub Kabir that is assigned to the fourth millennium B.C. This is additional evidence of the existence of clear parallels between the monumental architecture of Syria and Margiana. The radiocarbon data without correction —which is unacceptable for the monuments of the second millennium B.C.—as well as the iron found in the cultural layer of the temenos allow us to conclude that the Margiana temples could not be assigned to

a period earlier than the second half of the second millennium B.C. This confirms the chronology of the monumental architecture of this kind in Syria in comparison with that of Margiana.

The monumental architecture of Margiana reveals no local Central Asian roots but its well expressed, and age-old forms necessarily lead us to assume the existence of a previous line of development. It has already been mentioned that this kind of architecture was unknown either in Mesopotamia or in Iran, on the contrary it finds rather representative parallels with the monumental architecture of Syria.

The parallels between Margiana and Syria are not limited only to the monumental architecture but are added to by the glyptics, especially in regard to cult symbols. It is considered confirmed now that the deities from the seals and amulets of Margiana and Bactria find their prevailing parallels in the Syro-Hittite pantheon through Iranian art. This, together with the above-mentioned similarities in the temple architecture give very sound grounds to believe that the newcomer tribes whose motherland was somewhere in north Mesopotamia brought their traditions to Margiana.

The Gonur temenos served the needs of the population from the nearby settlement and represented a "sacred area" where a small temple associated with the cults of fire and hallucinogenic drinks was located behind the high and strong walls. This last assumption is proved by the whole complex of finds that includes those from the special room 137 with its "small gypsum baths" that contained remains of ephedra and hemp as well as ceramic stands for the straining of the juice from seeds and stalks. The drink that was prepared here was then transferred to the "courtyard surrounded by corridors", room 221, where apparently the cult rites associated with hallucinogenic drinks were performed.

The existence of the cult of fire is proved not only by altars but also by circular constructions or "deposits of sacred ashes" in the courtyards (rooms 214 and 295). They contained layers of pure ashes, with no inclusions. Their walls bear no traces of fire, which means that nothing was burned there and that the ashes were brought from elsewhere, from the altars, most likely.

It is noteworthy, that ashes from the altars of the contemporary Zoroastrian temples are sorted according to their value and then are either distributed among the houses of the ordinary inhabitants or kept in places arranged for some special purpose. If the assumption is true that this practice has continued from ancient times, then it is not accidental that at the Gonur temenos there were special "deposits of sacred ashes" that were located inside the temenos and filled with ashes of the first category — that is pure and without any inclusions, while the ashes of a lower category were accumulated outside the temenos. In this context special attention should be paid to the fact of the existence of such containers or "deposits of sacred ashes" in the undisputable fire temples at north Gonur and in Djarkutan (north Bactria) that were also filled with pure white cinders and had no traces of fire on their walls (Askarov et al., 1988). In this connection one should mention the fact that behind the outer southeast corner of the Gonur temenos there was located the so-called "hill of ashes" (about 100 by 50 m). This was just a hill without any structures around, the hill consisted of a thick layer of black ashes, charcoal, ceramic fragments and animal bones. A similar, though much smaller "hill of ashes", that has absolutely the same content is behind the outer southeast corner of the Togolok-21 temple. It is likely that both these "hills" were formed as a result of accumulating ashes of the "worst sort" alongside the waste of some collective cult meals that took place in the temples, as was the documented case for the Mesopotamian temples.

The special character of the temenos is confirmed by the whole set of finds that includes some unusual items alongside the common ones. This, first of all concerns two ceremonial axes. One of them is 45 cm long (Fig. 25, No 2), had a wooden handle and was found on the floor of the room next to a spear tip (or a dagger —Fig. 25, No 4). The other one was found in the cenotaph near the above-mentioned altars of fire (Fig. 25, No 1). The last circumstance is especially important since this is the only burial in the whole area of the temenos and probably belonged to a priest who served in the temple. For the first time in one room there were found fragments of three clearly ceremonial bone axes that exactly repeat the shape of the above-mentioned ceremonial copper and bronze axes (Fig. 22, Nos 1-2). Stone spearheads and in one of the rooms a marble head from a composite statuette that was similar to those from Bactria were found in the temple (Sarianidi, 1995, fig. 1-2).

A group of vessels as well as a brazier and a strainer that were possibly associated with the preparation of cult

drinks were found in room 437 (Sarianidi, 1995, fig. 9). One vessel contained a goblet made of marmoreal.

Extremely interesting were the amulets and cylinder seals as well as their imprints on the vessels and bullae. Among the latter we would like to emphasize the images of winged bird-men holding animals by their hind legs (Fig. 28, No 5) that find direct parallels in Syro-Anatolian glyptics. Alongside these examples, there are bullae with the imprints of subject compositions that find no analogies in the glyptics of the neighbouring regions. Their personages, first of all two-humped camels, have an apparently local origin.

Clay jar lids and bullae with imprints of seals and amulets are so far found only in the Gonur temenos in its storage and household rooms and may indicate the existence of a rather complex temple economy. Some bullae with imprints of amulets are burned and were likely to be used frequently and perhaps belonged to someone who carried out certain functions in the economy of the temple.

To summarize, the Gonur temenos was a ritual center that served the needs of the inhabitants of the capital settlement. It is most likely that later, at the end of the second millennium B.C. when Gonur was abandoned and the people migrated farther to the southwest, the role of the capital temple was passed to the Togolok-21 temple, which was not inferior to the Gonur temenos either in size or in significance.

The Fire Temple of North Gonur. The excavations at north Gonur have uncovered a centrally located walled settlement, or in other words, an acropolis or fortress, with a temple adjoining it on the eastern side. In the center of each of three walls of the fortress there was an entrance on both sides flanked by rectangular towers while on its fourth wall are several towers, on the ground of which location one can assume that other walls had towers as well, but the latter still remain unearthed.

As is clear from the excavations, complete remains of three temples and some partial remains of the fourth one were found in this place where they were built one on top of another. Each of them was built over the ruins of the previous one, thus leaving no doubt as to their chronological sequence.

The very first temple was built practically on the virgin soil except for some places where it rests on rubbish and ashy layers (Fig. 62, No 1). Sometimes these layers were covered by a special clay top for the sake of levelling the general surface. In spite of this we can still insist that the temple was the first building constructed on this place. By the time of excavations the eastern side of the temple had been destroyed as a result of natural deflation, a fact that makes it difficult to fully reconstruct the general layout of the whole complex and still we can assume that the western, northern and southern sides have preserved their original contours. Though the uncovered plan stretches from north to south it looks likely that the initial layout of the temple has almost a square outline that was typical for many other monumental buildings of Margiana.

The general plan of the preserved section of the temple is conditionally divided into the larger north

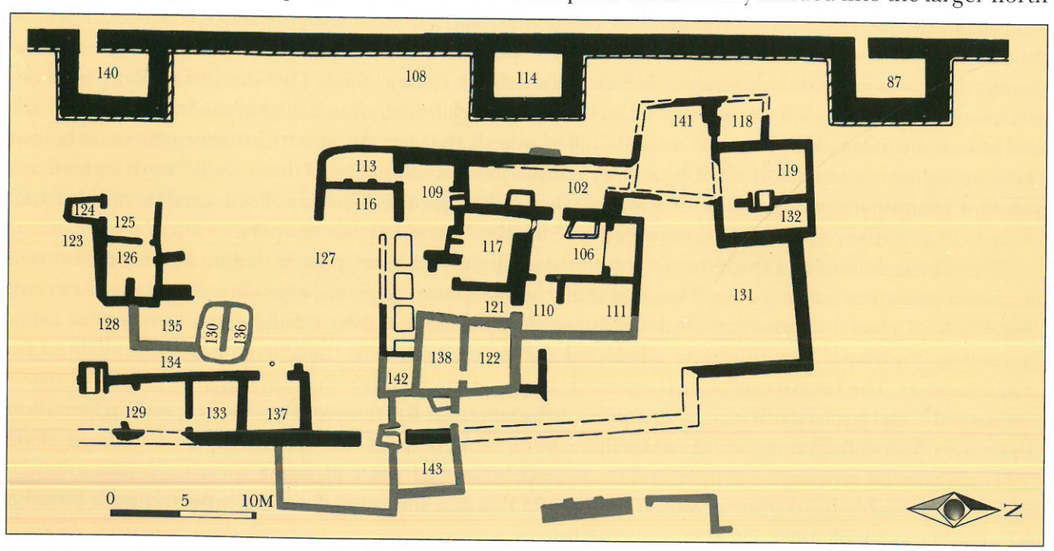


Fig. 62, No 1. Margiana. North Gonur. Plan of the first temple.

section and the smaller south section with an area free of any buildings (presumably an inner courtyard) located between these sections. It should be mentioned here that in the northern part the walls of the buildings appear much wider and the buildings in general are "more monumental" compared to those in the southern part, this most probably reflecting their different purposes.

The walls of the temple under discussion were partly (and in some cases completely) destroyed during the construction of the following temple, this naturally preventing us from forming a general impression of the whole temple. Still, based on what had been preserved, we can understand that room 106 was the most important of all the rest. In the northern section of this room at a height of about 30 cm a platform-podium was erected that was separated from the rest of the room by two side projections. Apparently at some later stage on its western wall a sort of a "small bath" of an irregular shape was made, as well as a small projection on the same western side of the podium. Two passages, one opposite another, lead to the adjacent rooms. There was probably one more passage in the southern wall that leads to room 117 that at some later stage was separated by a thin semi-circular wall. This can be evidence that initially rooms 106 and 117 were connected by a wide passage, thus making up one large room. In the southern wall of room 117 a special two-chambered hearth was placed, its smaller chamber bearing the traces of a huge fire which had burned in it. The second, larger chamber was not an ordinary one for cooking food but most likely served for keeping the sacrificed meat. We can identify it as a ritual hearth like the ones that were found in the cellas of temples located above the one under discussion.

Room 110 is noteworthy, since it has a passage that links it with the room 106. Originally the room was an open portico and later they added walls on the north and east sides, thus forming the room 110.

Equally interesting is the long, narrow room 102, which is linked with the adjoining room 106 by a common passage. In general, it should be noted that rooms 106, 117 and 102 together with the small portico clearly resemble the microcomplex in the temple of the third period (room 1) which in its turn finds analogies in the megarons of the Mediterranean. It is likely that the adjoining rooms 109 and 113 were also functionally connected with this assumed megaron, since they also possess the recessed niches and two-chambered hearths of the type described above.

In the northern section of the temple under discussion there are more rooms with the same type of double-chambered hearths which confirm their special purpose as cellas. Especially representative is room 132 with a special inner partition that extends into the middle of the room and ends with a double-chambered hearth. Its larger chamber is covered with a layer of small ceramic fragments that rests on a thin stratum of river sand.

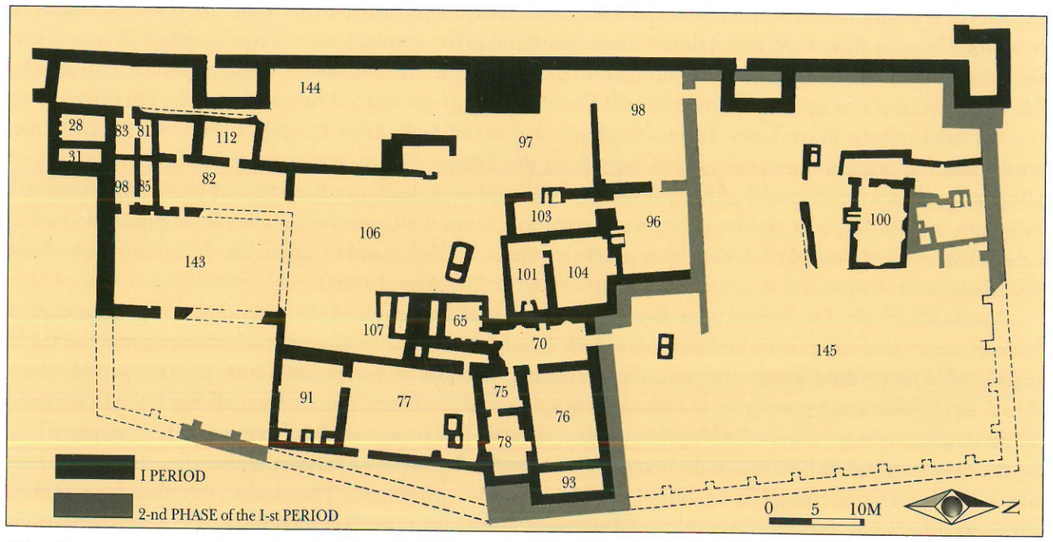


Fig. 62, No 2. Margiana. North Gonur. Plan of the second temple.

Nearby, behind a complete wall, four rectangular chambers are dug into the virgin soil and covered inside with a layer of bricks that had traces of a great fire. These chambers are of special interest, since they can explain the functional purpose of the first temple. It seems most likely that they were used as fire altars and find direct parallels in the temples of Togolok-21 and the temenos of Gonur. Besides, all these structures are similarly located in the secret sections of the temples behind high solid walls. The presence of the altars in the center of the first temple, though "hidden" behind the wall, gives a reason to regard it as a real temple of fire that was used exclusively for the cult of fire.

The ground plan of the southern section of the temple is also characterized by the regular outlines of its buildings, though the walls are narrower and lack the monumentality of the northern complex. Several interconnected rooms of a regular plan are situated in its western part, one of them with a double chamber of the above described type. But in spite of this, it seems that the southern part had an auxiliary, perhaps a domestic purpose. This is indirectly demonstrated by the oval room 130 with a partitioned section in it. Its floor was half a meter below the adjoining courtyard and dug into the virgin soil. Inside the room, fragments of severely burned ceramic slag were found. We will trace a similar picture in the temples of the later periods where cult rooms were located in the northern sections and auxiliary, domestic ones —in the southern areas.

The temple of the second period that was built on the ruins of the previous one overlaps it in size and extends for 85 m from the north to the south (Fig. 62, No 2). The northern and southern surrounding walls, which are preserved at this temple, start from the two towers of the fortress that are located on its eastern side and the northern wall has several pilasters on its interior. It is here where the northern microcomplex was located as if "hidden" in the northwestern corner of the temple of the second period and was possibly separated from the rest of the temple by a complete wall. The remains of this wall were partially preserved in the immediate vicinity to the south of this microcomplex.

Centrally located in this microcomplex is the large room 100 with a double-chambered hearth and five figured niches conventionally called "blind windows" (Fig. 63). Around this centrally located room, there are some auxiliary ones including a room with a double-chambered hearth, as well as two brick chambers on a high brick platform. These two chambers were filled with pure white ashes, with no inclusions. The traces of fire on the walls were situated in such a manner that these chambers seemed to be used as altars.

The room 100 was carefully covered, both outside and inside, with several layers of plaster made of levigated clay of a chocolate color with inclusions of chopped straw. On the whole, there is no doubt that the room 100 with its double-chambered hearths and "blind windows" was a cella that was safely "hidden" in the corner of the former temple. In the cult rituals of this microcomplex the preparation of the meat of sacrificed animals seems to play a major role, this being demonstrated by finds of double-chambered hearths. This was almost without a doubt a sacred section in the whole system of the temple. It is noteworthy that in the layer of debris that covers the ruins of room 100 there was found a long spout of a vessel (Fig. 13, No 1). Its top was open and a round ball-like thickening was located under the neck. This kind of vessel was used in west Iran (Geoy Tepe, Dinkha Tepe) in the Early Iron Period I (1500-1000 B.C.). Later, such vessels spread along the southern border of the Elbruz mountains up to northeast Iran (Khurvin, Gheytargeh) and represented a characteristic ceramic form of the Early Iron Period I in Iran (Muscarella, 1994, pp. 139-140). Thus, the locally made vessel spout from the Gonur temple serves as good chronological evidence of the period of decline that marks this part of the second temple. Another double-chamered hearth of fire was situated in the southern part of the palace (room 145).

Rooms 65, 70, 75, 76, 78 and 93 of the eastern section of the temple of the second period form a separate microcomplex that still existed in the third period. This microcomplex is closed and has no exit into the central courtyard. Among these rooms the central place belongs to room 70 where on its western wall two "blind windows" were made and between them a recessed fireplace with a vaulted cover is located (Fig. 64). On the inside all these structures are covered with plaster of levigated clay of brownish chocolate color. The fireplace bears no traces of soot and its base and walls being only red-burned give the impression that rather than for burning fire, it was used for keeping charcoals that were kindled somewhere else. The absence of a flue —usual for an ordinary fireplace— demonstrates its special purpose. "Blind windows" with a fireplace between them, as well as remains of gypsum plaster on the floor and walls confirm that room 70 was used as a cella.

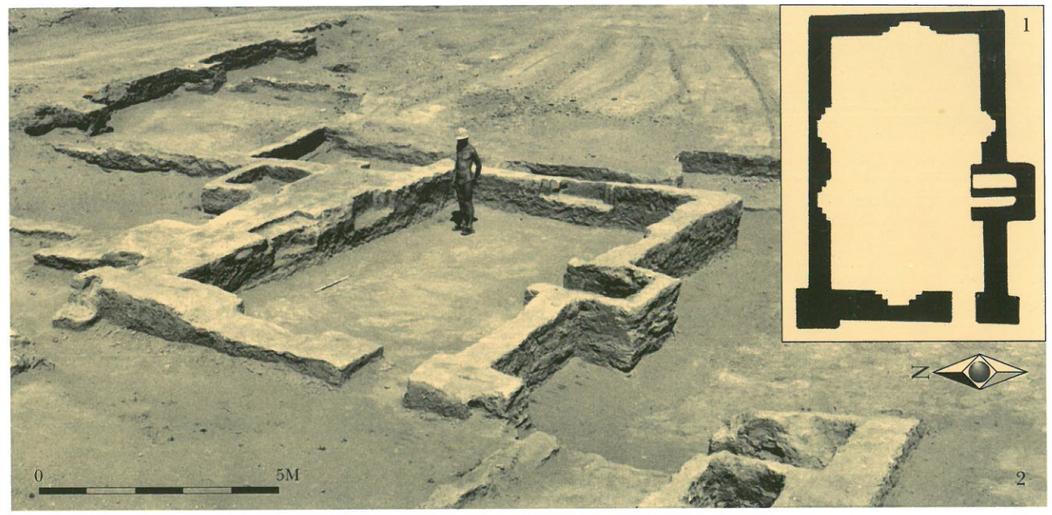


Fig. 63. Margiana. North Gonur. Fire temple. Room 100 (1). General view (2).

The neighbouring room 65 was also functionally connected with room 70. They have a common passage where the walls and floor were covered with gypsum plaster and niches are found in its walls. Both rooms have preserved upper floors, evidence that they existed in the third period.

Among the rooms of this microcomplex, rooms 76 and 78 draw our attention. In the floor of room 76, three small pits were found and in room 78 seven pits that were filled with severely burned animal bones (including bull's or cow's horns) and carefully covered with a clay plaster on the level of the floor. It is significant that these small pits bear no traces of fire, which leads one to assume that the bones were burned somewhere else and then gathered into the pits.

Two more rooms are worth mentioning. Room 77 has a brick "deposit of sacred ashes" and in room 91 on its eastern wall is a small brick platform with chambers, some of which are plastered on the inside with white gypsum while the others bear traces of fire. The rooms are likely to be somehow connected with the "deposit of sacred ashes" in the adjoining room.

In the northern section of the temple is another microcomplex where two rooms, numbers 96 and 103, stand out. They both have double-chambered hearths that are characteristic for rooms of a special purpose of the cella type. It should be added that neither this second temple nor the first one had the eastern part preserved, it seems that this section was destroyed due to the processes of erosion. In the large courtyard (room 106) there is a double brick chamber, representing a "repository of the holy ashes".

The two temples described above had a generally similar plan, the third one definitely differs from them. Compared with the temple of the second period, the third temple is smaller, since the northern microcomplex with the central room 100 was turned into a real garbage dump, sometimes the layer is over one meter thick. As in the previously built temples, the central place in the third one is also occupied by an inner courtyard with clearly expressed outlines. On three sides the courtyard is surrounded by a chain of extremely narrow chambers up to 1 m high, while on its fourth side is a surrounding wall with two passages. The eastern wall is not parallel to the western one and the courtyard has an outline of a trapezium. Perhaps, this is explained by the fact that at a later stage the eastern buildings (which existed in the second period) were completely abandoned (Fig. 65).

Thus, on all three sides except the eastern one, the courtyard is surrounded by these narrow chambers that are conventionally called cells and that have brick covers, or "roofs", so to speak. They are all hollow inside but their entrances are all capped with brick, a characteristic of the ritual sections of the Margiana temples. It suffices to remember that all cellas, fire altar "deposits of sacred ashes" and so on were always capped by brick this being done in the last period of the existence of the temples before they

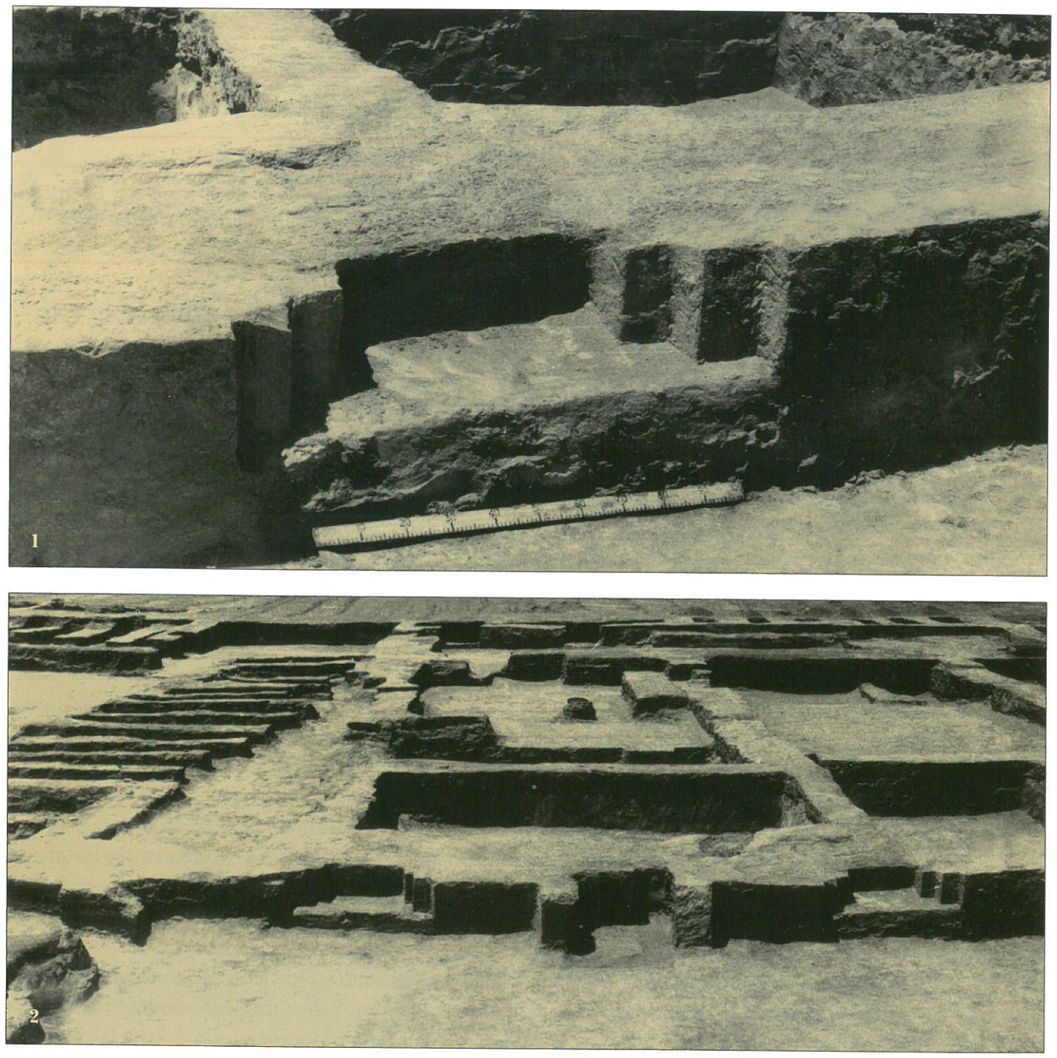


Fig. 64. Margiana. North Gonur. Room No 70: "blind window" (1), two "blind windows" and the hearth between them (2).

were completely abandoned. This action could be evidence that they wanted to protect cult buildings from any possible profanation or destruction.

Twelve cells are located on each of the three sides and those on the southern and western sides have their entrances from the courtyard while those on the northern side face the north and rest on the thin cultural layer, which confirms that it was built some time later than the two other rows of cells (Fig. 66).

As in the previous temples here too the ritual section is located in the north section of the temple while the domestic buildings occupy the south section. In the northern section the most important room is room 1 with a podium in its northern part that is 15–20 cm high above the level of the brick floor. The podium is covered with a layer of gypsum plaster that spreads towards the floor and the walls of the room. The podium was carefully covered by intact bricks in order to avoid any profanation or destruction. Two passages in the western wall link room 1 with the adjoining narrow room 8, a passage in the southern wall leads to room 2 and another passage was cut later in the eastern wall. Some changes were made in the second stage when additional small walls were built along the walls and two passages were

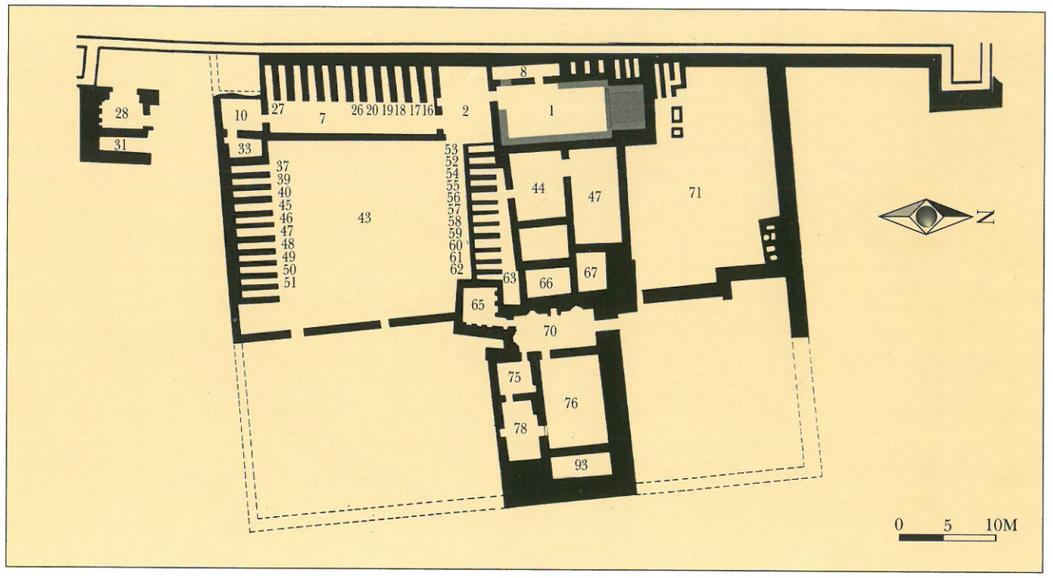


Fig. 65. Margiana. North Gonur. Fire temple. Plan of the third temple.

cut through into room 8. It remains to add that a southern passage from room 1 leads into room 2 that initially had no eastern wall, transforming an ordinary room into a sort of "antechamber" or a portico, more likely. On the whole, room 1 with a podium, an entrance that was located along the long axis and leading into the vestibule-portico reveals very close parallels with room 106 of the earlier temple and they both find similarities with the megarons of the Mediterranean.

The rooms located to the east of room 1 are vast, have regular outlines and are interconnected by common passages. In a small courtyard (room 7) on a high brick platform five round and rectangular chambers are placed, three of them bearing traces of fire while two others are not burnt inside. Apparently, it is not mere coincidence that the same can be observed on the "altar ground" in the temenos temple of south Gonur, where of five chambers only three have traces of fire as well and the other two are not burnt inside. To the east of them is another similar altar made of brick and consisting of two chambers. It appears likely that ashes from these altars were gathered and kept in the above-mentioned "deposits of sacred ashes" that were all carefully capped with brick.

After the third temple ceased to perform its original functions and was abandoned, a fourth temple was built over its ruins (Fig. 67). Only a few buildings of the last temple had been preserved by the time of excavations. Among them rooms 3 and 4 stand out. They are separated by a wall and in the southern wall of room 3 a "blind window" has been preserved, which may be a sign that it was a cella. The temple of the fourth period overlaps the top of the fortress wall which was ruined by the time of the construction of the temple. All four temples were built in a chronological sequence, which is demonstrated by the fact that three temples made use of the fortress wall and that the first and the earliest one was built almost simultaneously with the fortress. It is noteworthy, that during the excavations of the temples, apart from ceramics, there were found one stone "miniature column" and a bronze axe. Though its functional connection with the temple remains unclear, still it may not be accidental that a ceramic form for molding this type of ax was found in Dashli-3 (Bactria). Such axes were popular in Central Iran (Sialk), Central Asia and the Indus Valley (Mohenjo Daro).

A vessel fragment with a design of a bird and a tree scratched on it stands out among the numerous ceramic pieces. Another fragment is a rim of an apparently ritual vessel, its spout having the shape of a bull's head (its detailed description was given in the chapter "Pottery").

All the temples have a similar plan principle according to which an inner courtyard is located practi-

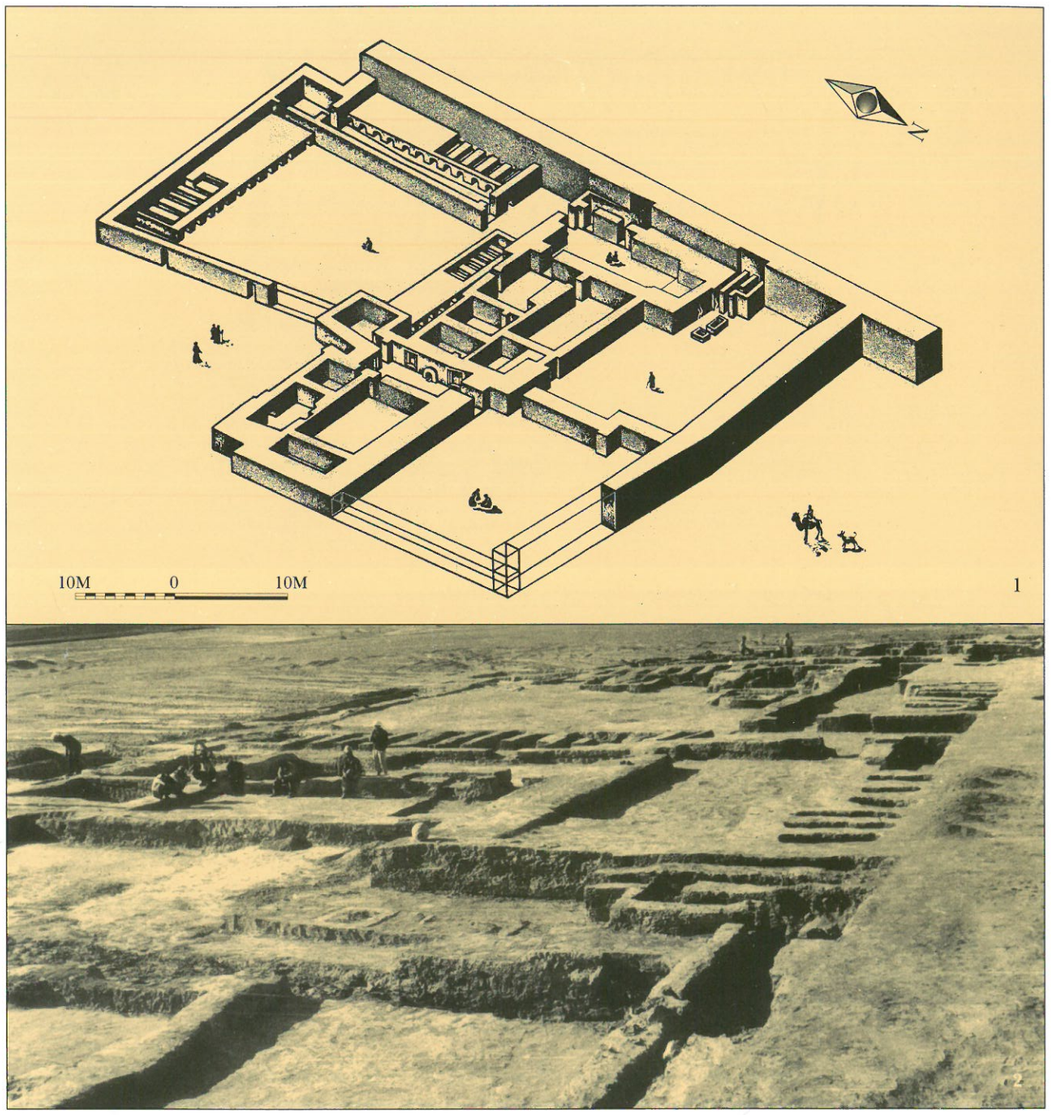


Fig. 66. Margiana. North Gonur. Fire temple. Axonometry by G. Goliakova (1). General view of the third temple (2).

cally in one and the same section of a temple and plays a leading role in every temple. Also, it has already been mentioned that in every temple a north section was always occupied by ritual buildings while a south section was reserved for household, auxiliary buildings. Moreover, in the temples of all three periods there were found hearths used for cooking of the sacrificed meat. To a greater extent the inheritance of ritual ceremonies is shown by the "megarons" of the first and third temples and especially by the "blind windows" that are traced up to the fourth and last period. The altars together with the "deposits of sacred ashes" give evidence that all these temples were not simply connected with the cult of fire but were exclusively fire temples. This is their principal difference from other Margiana temples, (Togolok-1, Togolok-21, the Gonur temenos) where two cults were practiced: the cult of intoxicating drinks of the soma-haoma type and the cult of fire.

The excavated monumental complex is extremely interesting from the point of view that it differs great-

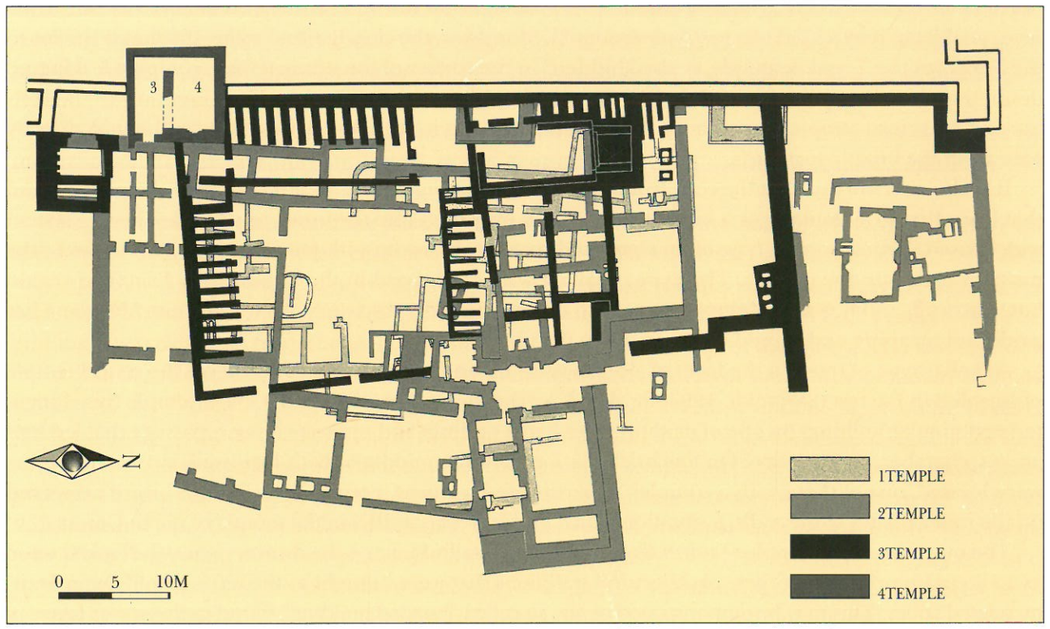


Fig. 67. Margiana. North Gonur. Fire temples. Summary plan. Rooms 3-4 belong to the fourth temple.

ly from the known temples of Togolok-1, Togolok-21 and the Gonur temenos in spite of the presence of some isolated points of similarity of certain architectural features. These differences include three main points: inner courtyards, cells that surround the courtyard on three sides and cellas with "blind windows".

Inner courtyards (assembly places for prayers) are characteristic for the cult architecture of Mesopotamia but temples surrounded by cells on three sides are so far known only in Anatolia. This is especially representative in the case of the main temple of Hattusa, the capital of the Hettite kingdom where they are defined either as "shops" or as "storage rooms". This similarity is additionally demonstrated by a northern chain of these long rooms in Hattusa (rooms 19–28) that ends in a vast room 18 located perpendicular to it. This plan principle finds direct analogies with the cells of the western section of the Gonur temple (rooms 16–27 and 7) and is also repeated in the Bujuk Kala palace (Bittel, 1970, fig. 22) thus demonstrating the vitality of this architectural method. The cells at the Gonur temple are considerably smaller in size and most probably had no everyday purpose. Based on this, one can assume that they simply reflect the architectural traditions that the newcomers had brought from their former motherland with its temples of the Hattusa type which were gradually dying out in Margiana.

So far the Hittite temples find no prototypes in Anatolia but some of their architectural features have parallels in the temple architecture of Syria in the beginning of the second millennium B.C. As already been mentioned, the inner courtyards of the Hattusa temples repeat the architectural plans of the Mesopotamian monumental architecture. Except for this similarity there is no other analogies between them. In the Hettite temples the cellas are always so to say "hidden" from the worshipers either inside rooms or even separated from the inner courtyard by high and complete walls and sometimes by a complex of buildings (Gurney, 1990, 120; Bittel, 1970, p. 55). However, in Mesopotamia these cellas are located along the axis line and those who prayed in the inner courtyard could see them very well. It seems that this kind of difference in the monumental ritual architecture of Anatolia and Margiana is not accidental and reflects a principal difference in their cult ceremonies.

Extremely interesting is the fact that in all Margiana temples (Togolok-21, the Gonur temenos) the altars of fire are always located in corners or in courtyards that are separated from the official central section by complete walls or even blocks of buildings. The same tendency is traced also in the temple of

north Gonur where a cella (room 1) has no direct passage into the inner courtyard but on the contrary is separated from it by a kind of a vestibule (room 2). Moreover, the clearly ritual room 100 that is similar to the one from the Togolok temple, is also "hidden" in the corner of the whole temple complex leaving no doubt that this was a preconceived design. So, one should say that in all of the Near East only in the Hettite and Margiana temples they placed their cellas and altars in secluded places that could not be directly seen from the inner courtyards.

It is also noteworthy, that the cella from room 1 has a passage that is located opposite the podium and that leads first to a vestibule or a kind of portico and only then into the inner courtyard. This is a system widely used in megarons: a type of an elongated rectangular room with passage located on the axis; the passage leads into the portico. This type of layout was widely used in the Aegean and Anatolian region but practically unknown in Mesopotamia. With this in mind, the discovery of a megaron in Margiana has profound meaning and should be discussed in detail.

A similar type of room in the form of a cella was found in the central ritual section of the round temple of Dashli-3 in Bactria (Sarianidi, 1997, fig. 11). Like the megaron of the north Gonur temple this elongated rectangular building on one of its short sides had a podium and opposite it was a passage that led into an antechamber, or a portico. On low brick platforms in the middle of both long walls two hearth-altars were located, one of them with a complex tripartite arrangement. Four "blind windows" were preserved on the inner planes of the walls, a situation which finds direct parallels in the temple of north Gonur.

The megaron in the temple of north Gonur was not casually built; on the contrary it may be looked upon as an accurate reflection of those architectural traditions that were brought to the territory of "Outer Iran" by related tribes. This may be demonstrated by the so-called "burned building" found in the upper layers of Hissar and that most likely served as a residential place of some local ruler or as a ritual building (Schmidt, 1937, tabl. XX). Like the Gonur megaron this building consists of two or three rooms arranged in a straight line but instead of benches it has a double-chambered altar-hearth built in the side wall, which finds direct parallels with the double-chambered hearths from other rooms of the north Gonur temple. Another similarity between the Gonur temple and the "burned building" of Hissar concerns the arrangement of a number of narrow rooms along the long side walls of the room. Moreover, in both places there were passages along the long axis and they first lead into an antechamber (a sort of portico) and only then through a side passage into the courtyard. In other words, it is clear that in both cases the cella was purposely "hidden" in the midst of rooms and that when a person wanted to get into it from the courtyard he had first to pass through the vestibule-portico and then would have to turn to the right to get inside of the cella.

Thus, one can observe that a special ground plan was used for building these structures for a definite purpose and that the "burned building" reflects the same architectural traditions as the temple of north Gonur. These traditions were deep and most likely carried in by related tribes who had migrated from one common center, this being demonstrated by the fact that the "burned building" of Hissar dates back to the very beginning of the second millennium B.C. while the temple of north Gonur dates to a much later period.

The most ancient type of megaron was found in the Eneolithic period in Macedonia and Thessalia (Agia Sophia and Magula), as well as on the Aegean islands. In Anatolia similar buildings could have been presumably found in Beycesultan (Lloyd, 1964, p. 157–158) but other scholars doubt this assumption (Werner, 1993, p. 6; Young, 1970, p. 67). However, in this initial period they were ordinary dwelling houses with a common hearth centrally located, and according to some scholars (M. Mellink, K. Werner) could have their roots in the Neolithic houses of Europe. Then in the Bronze Age via Crete this type of house reached Greece.

Indisputable megarons are known in the very early layers of Troy but still as ordinary houses. They were mainly located along the west coast of Asia Minor and in the Late Bronze Age, megarons as ritual buildings were widespread among the Mycenaeans (Tiryns, Pylos, Thebes). There are sound reasons to suggest that the assumed links were interchangeable, for example the megarons of Miletos could have appeared under the influence of the Mycenaean ones (Werner, 1993, p. 129). At the same time, based on the fact that megarons are known in west Anatolia and are not found in its central region, one can say that the cultural contacts mainly concerned the Aegean world (Blegen, 1950, p. 90). There existed variants (and perhaps various purposes) of megarons, even at the earliest stage not all megarons of Troy had centrally located hearths and columns in porticos (Bossert, 1942, fig. 43–44). Megarons were extremely popular in the Aegean/Anatolian region which is demonstrated by the finds of this type of buildings in Dimini (they are synchronous with Troy I–II) and Poliochni.

Notably, H.Frankfort has assumed that the elongated houses of Troy reflect the early version of the megarons of Homer that were imported to the Aegean world from southwest Anatolia and then gave birth to the Greek megarons and temples.

The problems of the time and the place of the origin of megarons are not quite solved yet, but we can speak more definitely about their construction in Mesopotamia where they are best of all represented in the Tepe Gawra settlement. Extensive archaeological excavations on this monument have revealed a formation of cultural layers with temples that date to the fourth to third millennium B.C. From the very beginning it was clear that from the most ancient of them up to the temple of the Gawra XIII layer (middle of the fourth millennium B.C.), they reflect the architectural traditions of south Mesopotamia, while the temples of the Gawra XI–VIII layers demonstrate new and different traditions in planning (Tobler, 1950, p. 7). The location of cult rooms in the temple corners and the arrangement of passages in the long walls are the characteristic features that unite the most ancient temples of Gawra and those of south Mesopotamia (Eridu, for example). In the later temples of Gawra the entrances were made in the wall of a short end and a portico was built in front of it, this architectural principle finds close parallels with megarons. Thus, beginning with the temples of Gawra X and especially Gawra IX layers the temples consist of an elongated cella and a portico without a column, as a rule. To a certain degree, this recalls a cella in the temple of north Gonur where the former platform-podium is fastened to the butt wall instead of being placed in the center of the cella (rooms 1 and 106).

S. Lloyd was the first to define these temples as megarons which appeared in north Mesopotamia as a result of the arrival here from Anatolia of new tribes that had destroyed the Gawra XIII temples (Lloyd, 1964, p. 163). Other scholars also support the idea of the Anatolian origin of the temples of Gawra XI-VIII that look like typical megarons (Crawford, 1993, p. 63). A. Tobler, who had spoken about certain differences between the early and late temples of Gawra, still called attention to the existence of common architectural traditions of the temples of the XI-VIII layers. This makes us reconsider the theory of S. Lloyd according to which the megarons of the VIII layer appeared as a dramatic result of the arrival of tribes of the grey and red monochrome pottery who destroyed the old temples of Gawra and replaced them with megarons.

The temples of Gawra are interesting for our subject, since already in the temple of the XIII layer the interiors of cellas were decorated with stepped niches that can be interpreted as an initial type of "blind windows" and in the long run they find direct parallels in the cellas of the north Gonur temple. It should be noted, that many temples of the Near East are decorated with either simple or two-step niches that in some cases were used for placing the statuettes of gods and sometimes for the ornamentation of the outer planes of walls. In Tepe Gawra, as well as in the Gonur temple these were always three-step (or even more, sometimes) niches used in the interior of cellas and were most likely altar niches. It should be stressed that in the Gonur temple these niches are found at all stages of its existence even when the temples had declined, as was the case with the fourth temple. Also in the Gonur temple during the same period there were found two or three such rooms with "blind windows" (rooms 70 and 100) as had happened, for example, in Hattusa in temples I, II and VI where two cult rooms were simultaneously located on different sides of the courtyard (Macquenen, 1975, p. 129). Summing up, one should say that all these "blind windows" were built in special cult rooms, a kind of cella and as such were most popular in Tepe Gawra (at least from the middle of the fourth millennium B.C.), in the temple of north Gonur and throughout the Near East.

Besides, as has already been mentioned, "blind windows" were found in the temple or palace of Dashli-3 (North Afghanistan) where the plan and location of the room with these "windows" recall the temples of Margiana and Syro-Anatolia.

Apart from the north Gonur temple, the long narrow cells are known in the Gonur temenos, in the Togolok-21 temple, as well as in south (Dashly-3) and north (Djarkutan) Bactria. These cells are located

on the long walls, have unknown function and most likely simply reflect a kind of a memory of old architectural traditions that the first colonists brought with them to the Bactrian land.

Based on the finds of "blind windows", cells and on the location of cellas far from the eyes of the uninitiated, one can conclude that the temples of Margiana (and probably, of Bactria) find their prevailing parallels in the ritual architecture of the Syro-Hittite world. Here it should be mentioned that in the Hettite architecture we have not yet found "blind windows" and their presence in north Mesopotamia (Tepe Gawra) and in Margiana and Bactria may mean that the tribes that came to Bactria and Margiana had their first homeland in Syria or more generally, in north Mesopotamia.

An indisputable Mitannian temple in Tell Brak may serve as additional evidence to this theory, since the sacred function in it is performed not by an assumed altar which has been preserved (D. Oats, 1987, fig. 7), but by a "blind window" located in the middle of the wall and flanked on both sides by semi-columns and with a stepped "podium". If we remember that the Mitannian state was probably linked

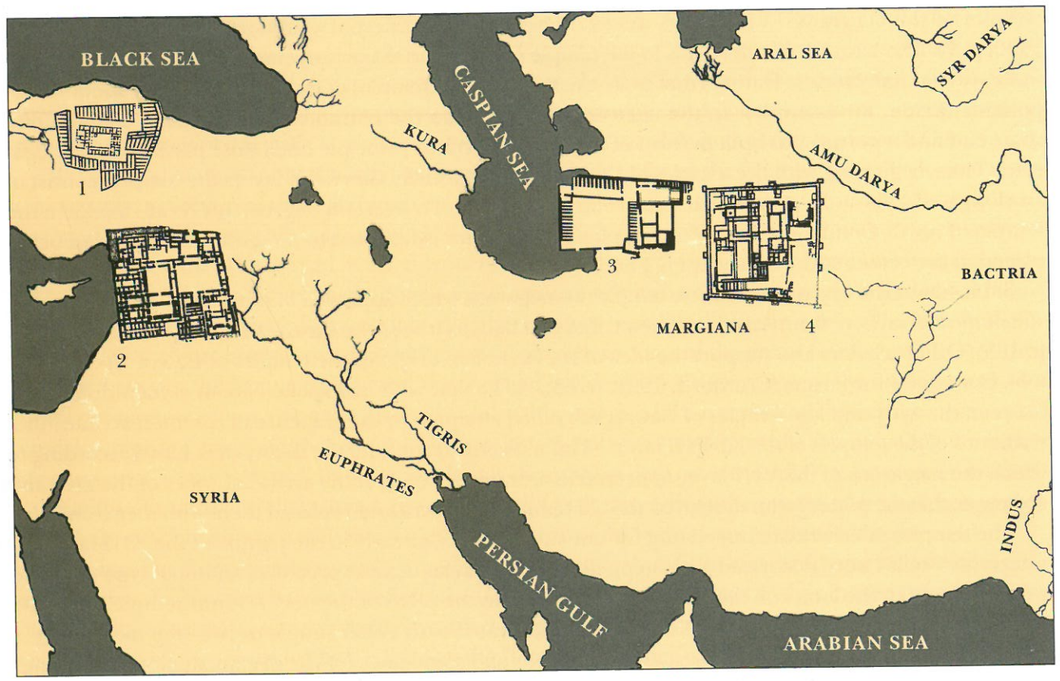


Fig. 68. No 1. Monumental buildings of Margiana and Near East:1- Hattusa; 2-Mari; 3, 4-Gonur.

with the Indo-Iranian, Aryan world, then its similarity with cult monumental architecture of Margiana and Bactria acquires a special meaning. Extremely interesting in this connection is a monumental building with a clearly ritual purpose that was found on the settlement of Tilla in Anatolia. Behind a strong defensive wall vast rooms are located, their walls and floor with traces of white plaster. "Blind windows" and composite hearths were found in the interior of three rooms. One of the rooms has five such "blind windows" like room 100 of the Gonur temple and a composite hearth is on its floor. The lack of finds (which is probably linked to the special purpose of the rooms) makes it difficult to determine the exact chronology of the whole complex. Conventionally it is referred to the Achaemenid period (French, 1983, Pl. I), though the stratigraphical data support its belonging to the Neo-Assyrian period (French, 1984, Pl. 4). This last assumption is based on the find of a cylinder seal typical of the Neo-Assyrian glyptics.

The monumental ritual temple complex of Tilla has a principal significance for our subject. The absence of local Anatolian roots most likely indicates its inheritance from the temple architecture of the

Gawra type in north Mesopotamia. It is not at all improbable that there were certain links between the temples of Margiana and Bactria and the Hettite-Mitannian temples and more widely with the Anatolian and Aegean world. It suffices to remember the theory that was worked out by T. Young about a quarter of a century ago according to which megarons spread farther to the east and up to Iran where at the settlement of Hasanlu there was excavated a burned building that had no local architectural roots but revealed parallels with the megarons of the Mycenaean time, with those from Pylos, in particular (Young, 1970, p. 67). In this case an earlier megaron of the north Gonur temple reflects the first signs of penetration of this type of ritual buildings from west to east.

Different designs of the Margiana temples definitely testify to the circulation of at least two main cults: fire cult and the cult of libations. Sometimes they were combined in one and the same temple, as in case of the Togolok-21 and Gonur temenos and sometimes a whole temple was reserved for one cult only, as for example the fire temple at north Gonur.

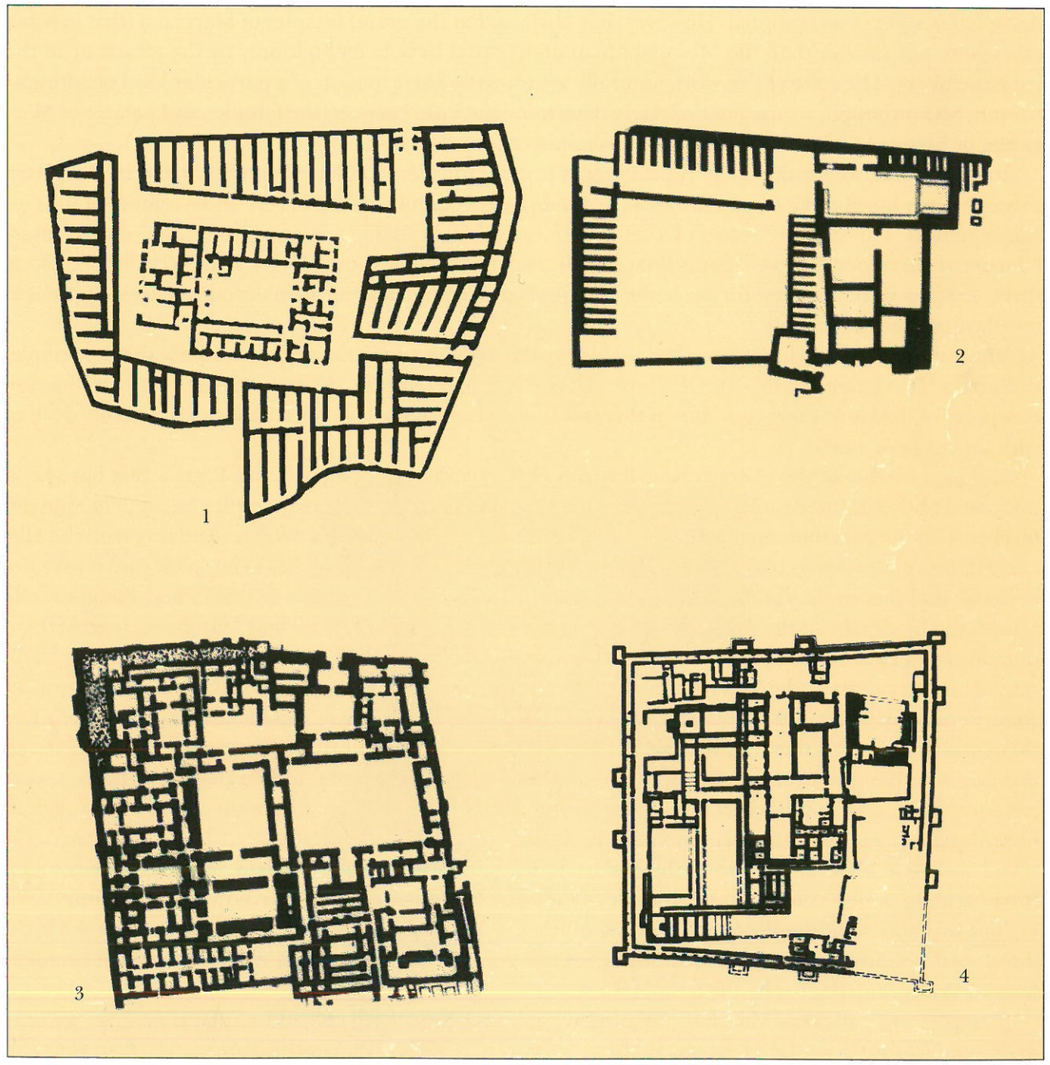


Fig. 68. No 2. Comparative table: Hattusa temple (1), Gonur fire temple (2), Mari palace (3), Gonur palace (4).

The temples in Margiana were most likely devoted to certain cults of fire and libations rather than to material or personal gods. In this respect they differ from Mesopotamian temples that were necessarily decorated with sculptures of gods and deities. On the contrary, the temples in Margiana are in full accord with the Hettite and Mitannian temples, none of which has similar sculptures. All this testifies to the existence of polytheism in the ancient tribes that lived in Margiana and Bactria during almost the whole second millennium B.C.

It is definitely true that the temples of Margiana were served by a well organized administration that was somehow linked with the secular bureaucracy. Unfortunately, this assumption is not supported by any written sources. We can only indirectly rely on the Mesopotamian manuscripts that can help us in reconstruction of the role that the temples played in the local society of Margiana. We can assume that temples were served by a staff of priests and servants. When, for example, the temples were constructed by builders and artists, the priests in their turn provided food for the king's administration (Magness-Gardiner, 1994, p. 129–131). Certainly, the fact of quoting written sources from other territories (Mesopotamia, Anatolia) is always conventional. However, it is obvious that the grand temples of Margiana (that in some cases were not smaller than the Mesopotamian ones) could have been built only by the efforts of all the tribe members. The scale of this work naturally assumes the participation of a particular kind of administration. So far though, we cannot definitely determine the links between the temples and palaces of Margiana, or between its secular and religious administrations (Fig. 68).

In conclusion, we would like to repeat that at present four temples have been excavated in Margiana, three of them having principally the same ground plan (Togolok-1, Togolok-21 and a temple in the Gonur temenos). This design consists of a centrally located "courtyard in a frame of corridors" that by interconnected corridors and passages is linked with a near-by "white room" (Sarianidi, 1994, fig. 6). These three temples were reserved for two cults: the libation of hallucinogenic drinks and the fire cult, the latter playing a secondary role.

The temple of north Gonur was devoted only to the fire cult and in this respect it recalls the fire temples in Bactria (Djarkutan, Dashli-3). Of all the above described temples, the only exception is the "bastion complex" of the Gonur temenos, but in this case it needs additional evidence that we are actually dealing with an image of a deity.

Having in mind all the characteristic features of the temples of Margiana and Bactria that have been discussed above in full detail, one can conclude that Bactria and Margiana temples had a principle difference with the Mesopotamian temples, while at the same time showing a definite similarity with the Hittite (Hattusa), Neo-Assyrian (Anatolia) and to some extent Mitannian (Tell Brak) temples. And it may not be accidental that in the coming Zoroastrian religion, there were no images of deities and the main role was played by rituals. At the present moment we have six temples in Bactria and Margiana, none of them demonstrates local roots, i.e. principles of lay-out characteristic of the local Central Asian building tradition. This fact points at the "alien" nature of structures. Monumental temples could not appear and become popular in Central Asia as a result of usual trade and culture contacts: thousands of men were erecting them and then prayed there for the aid of their gods and performed usual cult rituals for many years. In this case one has good reasons to suppose that the plans of the temples of Margiana and Bactria were brought there as an "architectural memory" by the tribes of newcomers who went on with old religious ceremonies at a new place as their ancestors had been practising at their homeland. Thus, we arrive to the final conclusion about the origin of the culture of Bactria and Margiana —it had appeared as a result of broad settling of new tribes coming from their old homeland somewhere in Syro-Anatolian region.

The monumental temples and burials with human victims give us good grounds to assume the high-developed political-economical structure of the indigenous society as well as the king's power, probably limited to a certain degree by the people council.

Temples and palaces of Margiana are evidence of centralized, both cult and secular power, so, we have no grounds to suppose the presence of khans who lived in galas (Lamberg-Karlovsky, 1994, p. 400) and were "the new type of the political economical structure" supposedly spreading from here right up to the Indus Valley (Hiebert, 1995, p. 201).

MARGIANA AND THE NEAR EAST

CHARTER IV

The most characteristic archaeological assemblage of the Bactria-Margiana Archaeological Complex consists of the following items: amulets of the Margiana style, compartmented seals, the "miniature columns", "weights", "scepters", cult vessels with sculptured rims, composite statuettes, steatite kidney-shaped vessels, stone biconical spindle whorls with circle ornamentation, stone and copper "cosmetic" bottles, including the terriomorphic ones with a high neck on the back, axes with a "cock's tail" butt and occasionally with an engraved image of an eye on the socket, the "harpoons" that so far have been found only in Bactria, as well as pins with zoomorphic and phytomorphic tops (including the double-headed ones). This list should be supplemented by the catacomb graves (including those that were first burned from the inside), chamber graves located outside the settlement limits, as well as the ritual burials of sheep. Also one should add the monumental temples dedicated to the cult of ritual beverages of the soma-haoma type and the fire cult.

The independent and rather characteristic archaeological complex to the west of the line of Hissar-Shahdad-Tepe Yahya is so far not well known and the separate finds there have an import origin. The BMAC emerged suddenly in the territory of "Outer Iran" showing no clear signs of a local origin, while the compositions on seals and amulets, the terriomorphic bottles and "harpoons" definitely speak for western links that can be traced as far as north Mesopotamia and Anatolia.

All this speaks in favour of the existence of certain local components in each given area throughout "Outer Iran" (East Iran, Turkmenistan, Baluchistan). It leaves out Bactria where no settled farming life existed prior to the arrival of the BMAC tribes. The only exception is Shortugai on the very north-eastern edge of Bactria, which was a trade center for the people of the Harappan culture who were engaged in the trade of the Badakhshan lapis lazuli.

For many regions in the territory of "Outer Iran" we can only guess about the local variants while in Margiana, with the present state of our knowledge, they are obvious and clear. This is demonstrated by at least two burial ceremonies. Thus, according to the local south Turkmenian tradition the deceased was buried in an ordinary grave pit within the limits of the settlement, but according to the totally new custom, the deceased were buried in a catacomb (sometimes initially burned on the inside) outside the settlement limits. This latter custom was also characteristic of Bactria. This difference is also testified by the anthropomorphic plastics of Margiana with their age-old traditions in south Turkmenistan, in contrast to the ritual vessels with figured friezes along the rim from Bactria and Margiana. Future excavations in east Iran and Baluchistan will undoubtedly bring new proof in support of this assumption.

Following the preliminary notes we will set forth the details of our main subject.

Margiana and South Turkmenistan

The location of Margiana in east Turkmenia should suggest the existence of very close similarities with south Turkmenia. And indeed, there are traces of such analogies in a general form, especially in the earliest Kelleli period. This is clearly seen if one compares the respective ceramic complexes and especially the collections of the anthropomorphic plastics. The Kelleli settlements of Margiana are believed to be inhabited by immigrants from south Turkmenistan. This connection is demonstrated by the general set of the main forms of the Kelleli ceramics and more precisely by the vase stems, isolated examples of which are found in south Turkmenistan as early as in the Namazga IV period. However, it should be noted that such crimped vase pedestals are also found in northeast Iran where the deep-rooted local tradition of this vase form goes as far back as to the Hissar I ceramic complex. In this respect rather representative are the bell-shaped vases with conical basins and squat hollow stands of the Kelleli period. Being found on the earliest levels of Hissar (Schmidt, 1937, fig. 38 (39), they were undoubtedly locally made and from there could have got to south Turkmenistan as a result of trade. In general, the Margiana Archaeological Complex produces a dual impression: alongside the undoubtedly local south Turkmenistan traditions of the Namazga V period there are traces of rather definite connections with neighbouring Iran and farther to the west. This dual impression is very strongly supported by the materials of the Gonur period and especially of the Togolok period. Indeed, the archaeological complex

of these periods finds direct, convincing connections in the materials of Hissar III-Shahdad rather than of south Turkmenistan. Undoubtedly, this fact testifies to the existence of the second component that played an important role in the formation of Margiana in the Late Bronze period.

Comparing the complexes of Kelleli and the Namazga V type, one can speak of the succession in the objects of the anthropomorphic plastics, in the collection of the compartmented seals and in general ceramic traditions. The same kind of similarity though to a lesser degree includes the "miniature columns", stone "weights, a "scepter" and the ceramic bases from Altyn Depe, where they all appeared at the time of the emergence of the BMAC. It should be mentioned that the "miniature columns", "weights" and ceramic bases that are said to be known in east Iran as early as the third millennium B.C. (for example, Shahri Sokhta) could have possibly got to south Turkmenia far back in the Namazga period as a result of cultural and trade contacts.

The materials from Murgab and the Namazga V complex of south Turkmenistan show a general resemblance. Much more complete and diverse parallels are marked between the materials of the complexes of Namazga VI and Anau III. At present, the layers of this period are found in Anau, Elken-Depe, Yangi Kala cemetery, the top of Namazga Depe, Tekem-Depe, Ulug-Depe, and presumably in the very upper layers of Altyn-Depe. In the south mound of Anau these materials correspond to the Anau III period, which is confirmed by the ceramic complex similar to Margiana (Pumpelly, 1908, pl. 10 (12, 14). It should be mentioned that alongside the clearly expressed similarity of the forms of the wheel-made ceramics, in both cases there were found items of handmade pottery of the Andronovo type (Pumpelly, 1908, pl. XV, No. 7 (9). Above all, this can help in the chronological synchronization of the ceramic complexes under investigation.

The ceramic analogies are added to by the biconical steatite beads with a circular design, the amulets of the Murgab style with engraved ornamentation including the one in the shape of a three-sided prism (Pumpelly, 1908, pl. 45, No. 8) with images of a man, a lion, and a griffon. One should especially mention the fragment of the steatite vessel cut in the kidney shape (Pumpelly, 1908, pl. 45, No. 6). This archaeological assemblage speaks in favour of close similarity of two concrete archaeological complexes rather than of separate categories of items.

Near Yangi Kala a settlement with a cemetry outside its limits, both of the Late Bronze Age, was found and partially investigated. The grave goods include bronze bracelets and pins, as well as vessels that find direct parallels in the Murgab ceramic complex (Ganjalin, 1956). To the east of Tekkem the microrelief reveals some badly preserved remains of narrow, rectangular chambers that recall the "cells" in the Margiana temples.

So far the materials from the top of Namazga Depe are unfortunately published only randomly. The published material shows closer resemblance with Margiana than with the Namazga V period. Especially representative is a "strainer" (that is elsewhere found only in Margiana) made in a rare shape of a conical bowl with a hole in the center. In the mounds of the contemporary Moslem graves at Namazga Depe there are stuck chert "scepters" of the same type as the one that was found in Grave 362 at Altyn Depe. A similar situation is true for the materials from Tekkem-depe that are not fully published either. Still it is possible to discern that both, the old and especially the new material finds its prevailing parallels in the Margiana complex of the Late Bronze Age rather than in south Turkmenistan itself. The materials of the Namazga VI period show close parallels with the upper part of Ulug Depe, this especially relates to the characteristic forms of vessels, to the pins with grating tops and to those in the form of two birds, which find analogies in the Yangi Kala cemetery and in Margiana.

The possible definition of the initial stage of the Namazga VI complex at Altyn Depe seems rather difficult, its main cover layer refers to the Namazga V period in the unanimous opinion of scientists. The material from the highest point of Altyn Depe provokes a special interest since it belongs to the final period in the life of this settlement. Here, in an area of 500 sq. m there was found an ancient plan of two constructional horizons. It was in the upper horizon that two "treasures" were found that consisted of vessels, including a carafe made of grey clay, as well as ivory items, copper and silver cosmetic bottles, a mirror, stone and faience decorations.

According to A. F. Ganjalin, the majority of these items find unquestionable analogies in the Hissar III layer (Ganjalin, 1967) and as we can say now, in ancient Margiana as well. This set of similar features

can be extended if we add the above-mentioned "miniature columns" and a "scepter" from the Altyn Depe graves. It is known in the literature that at Altyn Depe there are found items more characteristic of the Namazga VI than of the Namazga V periods. This fact demands more precise determination of these complexes (Pottier, 1984).

All the facts mentioned above lead us to reconsider the correctness of the term "archaeological complex" of Namazga VI. Over 30 years have passed since the scholar B.A. Kuftin, based on the level of our knowledge at that time, determined the stratigraphical column of Namazga I-VI. The present archaeological material makes us question the necessity of singling out the Namazga VI complex. It seems that the excavations of sites in the Late Bronze Age in south Turkmenistan, including those of the top of Namazga Depe speak very clearly to the fact that there is no such independent complex of Namazga VI that could have had the necessary set of objective archaeological features. This fact in its turn testifies to the evolutional development of the south Turkmenistan tribes which started in neolithic Djeitun and finished in the period of Namazga V. The latter was gradually replaced by the culture of the newcomers and was conditionally named as the Bactria-Margiana Archaeological Complex (BMAC). The materials from the top that were defined as the Namazga VI complex in fact represent the late stage of the Namazga V complex that was partially mixed with the BMAC. This statement is additionally supported by the corresponding materials from the south mound of Anau, from Tekkem depe, the cemetry of Yangi Kala and others.

Ph. Kohl has suggested defining these complexes as Namazga VI-A (Kohl, 1984). However, this still does not precisely reflect the objective reality of a succession of archaeological complexes. It seems more correct to consider these materials as belonging to the BMAC in its south Turkmenistan version. In this case one can speak of the Namazga version of the BMAC and it seems quite possible to add in the future the "Altyn", "Amu Darya" and other versions of the Bactria-Margiana Archaeological Complex. Moreover, it would be absolutely wrong and out-dated to insist on the term of the "Murgab" version of Namazga VI since this contradicts the available archaeological facts.

Even this short comparative review shows that the archaeological complexes of the south Turkmenistan sites in the Late Bronze Age find more analogies in Margiana than in south Turkmenistan of the previous period. But at that time in south Turkmenistan there still existed only some single settlements while in the Murgab delta there were several dozens of them. One gets the impression that the center of life migrated from the traditional farming oases of south Turkmenistan into the basin of the Murgab River. Simultaneously, this migration takes a step forward from the irrigation oasis to the development of large river valleys. This fact has been specially studied for a long time but no conclusion has been reached yet.

Margiana and Bactria

Recent decades are marked by the discovery of Bactria, an earlier unknown country of the Late Bronze Age that was located on both banks of the Amu Darya River. Large-scale archaeological excavations of the corresponding sites in north (Askarov, 1977) and south (Sarianidi, 1977) Bactria have revealed there a rather peculiar and independent farming culture of the ancient oriental type. Simultaneously, similar work in Margiana has demonstrated the extremely close parallels with the Bactrian monuments, as has already been mentioned above. Having this in mind and also trying to avoid terminological confusion, it has been suggested that the corresponding materials from both regions belong to a common Bactria-Margiana Archaeological Complex. The suggestion has been supported by a number of scientists (Jettmar, 1983, p. 231).

Indeed, in many respects, the material cultures of Bactria and Margiana show considerable similarity that can be generally characterized in the following way. The similarity between the sites in Dashli-3 and Sapalli in Bactria and Kelleli 4 in Margiana is not limited only to the general planning principles but also includes the common building technique. The funeral rites wherein the dead were usually buried with a north orientation are almost identical. Also very similar are the ritual burials of lamb accompanied by grave goods. In both areas graves located within, as well as outside the settlement limits are found. So far

Fig. 69. Comparative table: Margiana and Bactria.

only in Bactria and Margiana was there excavated such a large amount of stone amulets of the so-called Murgab style with engraved designs that are not simply close but in some cases identical to one another. Almost nowhere but in Bactria and Margiana have we found ritual vessels with sculptured rims, a fact that apart from everything else can testify to the closeness of their religious ideas. The similarity is also traced in stone maces decorated with twisted bands (possibly snakes), biconical beads with circle ornamentation, cosmetic bottles, pins with heads in the shape of a squeezed fist as well as ceremonial axes, footed alabaster vases, stone kidney-shaped vessels, the so-called composite statuettes and other items. Such close similarity sometimes reaching the level of being identical mainly exists in those categories of items that heretofore were almost never found elsewhere in such quantity and in so clear a form. One should also add the practical identity of the ceramic complexes. All that was mentioned above, leaves no doubt about the cultural or rather hereditary relationship between Bactria and Margiana (Fig.69).

It is noteworthy, that between Bactria and Margiana there is but one very important difference: Bactria lacks the anthropomorphic plastics known in Margiana. This difference seems to confirm the differences in the ideological beliefs as well. On the other hand, it is significant that the anthropomorphic plastics are also absent in the Auchin and Takhirbai oases of Margiana. The archaeological complex in Bactria is represented in a clear form and has no local ancient farming ancestors. Thus, the absence of anthropomorphic plastics is the characteristic feature of the Bactrian archaeological complex. In contrast, in Margiana the anthropomorphic plastics (in places where they are found) are accompanied by ritual vessels, this being an indication of the continuation of the local south Turkmenistan traditions, as well as the origin of new ones that involve other cult ceremonies. In other words, there is every reason to believe that two types of ritual ceremonies were widespread in Margiana, in one case anthropomorphic statuettes were used and, in the other case cult vessels were used. This difference in cult practices testifies to the deep tolerance of the ancient population of Margiana.

Some other local differences of a secondary importance only stress the similarity (one might even say, the sameness) in the majority of the basic features of the material cultures of Bactria and Margiana. But even this fact does not help to solve the problem of the origin of the ancient farming culture in the Murgab delta. The fact of the matter is that the Bactria- Margiana Archaeological Complex embraces one period of time and only explains the historical and cultural contacts of Margiana without solving the problem of its origin. The history of the origin of Bactria should be studied even more closely than

that of Margiana. Both these ancient countries can be looked upon as two branches of the same root.

The Bronze Age sites in Bactria and Margiana were excavated thirty years ago and among other hypotheses at that time there was formulated one according to which these two historical areas originated in south Turkmenistan. But now in the light of new data such an assumption appears out-dated. It is documented that the BMAC differs in its main features from the south Turkmenistan area and that the roots of its origin via east Iran go as far west as north Mesopotamia and Anatolia.

Margiana and Northeastern Iran

Our attempts to find the origin of the BMAC direct us to northeast Iran where the Hissar settlement and in part the so-called Astrabad treasure form the most convincing analogies. Leaving aside the problem of ceramics let us discuss the most characteristic categories of items. Like Margiana and Bactria, Hissar also displays "miniature columns", "weights", copper compartmented seals, cylinder seals, cosmetic bottles, stone biconical beads and spindle whorls with circle ornamentation, as well as pins with figured tops and other items. It is significant that this similar complex is found only in Hissar III, in other words, in the upper layer of this site and within the main parameters shows no clearly expressed local prototypes. In a certain way, the archaeological complex of Hissar III is closer to Bactria and Margiana than to Hissar II (Fig. 70).
The same can be said about the ceramics. Except for vases on high stands the rest of the main ceramic forms of Hissar III find closer parallels in Bactria and Margiana than in Hissar II. This involves such types of pottery as decanters, saucers, goblets, tea kettles and spouted vessels.

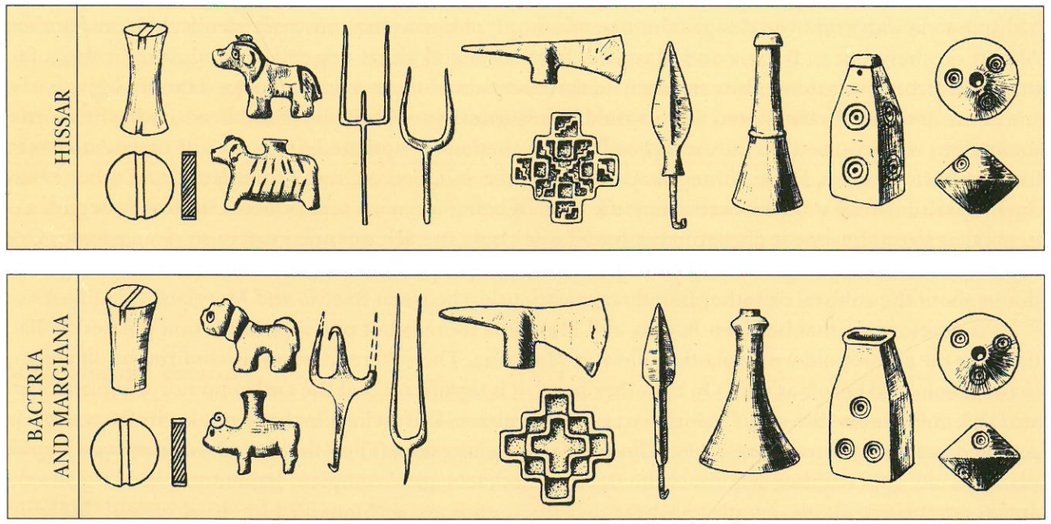


Fig. 70. Comparative table: Bactria-Margiana and Hissar.

Margiana and East Iran

Up until now the archaeology of east Iran remains the less studied and for many years our knowledge was limited to scanty data from the southeast and northeast of Iran. The comparatively recent excavations of Sahri Sokhta, Tepe Yahya and Shahdad have revealed antiquities of the eastern region of Iran. At present we can definitely assume that in the Kerman oasis there existed an ancient farming culture that flourished in the Bronze Age.
It was this period that produced the most impressive objects found in the tombs of Shahdad, where they made up an assemblage of grave offerings. The comparison of these objects with the material from the

Bactria-Margiana Archaeological Complex reveals great similarity and in many cases exact identity between them (Hakemi, 1972). Indeed, the compartmented seals, metal vessels of a peculiar design in the form of goblets, saucers and also vessels with shovel-like spouts are not just similar, they are identical. The general similarity of the main characteristics in these two areas is additionally supported by such things as votive ceremonial axes with cock-tail butts, decorated steatite bottles and by images of a goddess represented in a canonical pose with her hands at her waist (Sarianidi, 1981).

To an even greater extent, this historical and cultural parallelism is supported by the corresponding ceramic complexes of Shahdad where alongside the grey pottery one can find the light-ground pottery that is similar to the ceramics of Bactria and Margiana. This important fact may possibly indirectly indicate the existence of a ceramic province in east Iran where, as in south Turkmenistan, the light-ground pottery was manufactured. Thus, one can assume that in the period of Late Namazga IV in south Turkmenistan besides the introduction of double-chambered kilns and a potter's wheel, new pottery forms based on the ceramic traditions of east Iran appeared and spread. In this case the similarity of ceramic complexes between Bactria and Margiana on the one hand and south Turkmenistan on the other, can be explained by the fact that at least in the Bronze Age they both belonged to a common ceramic province with its center possibly located in east Iran.

This may be confirmed by the Tepe Yahya site, which reflects the traditions of the assumed province though not located there. Corresponding materials were found in the Yahya IV layer and among them the most representative are the vases and goblets on high stands (Lamberg-Karlovsky, Tosi, 1973) as well as floral designs of a "tree" type that were quite popular on Margiana pottery. Besides the parallels in pottery, analogies are also traced in steatite vessels with similar "tooth" designs, copper compartmented

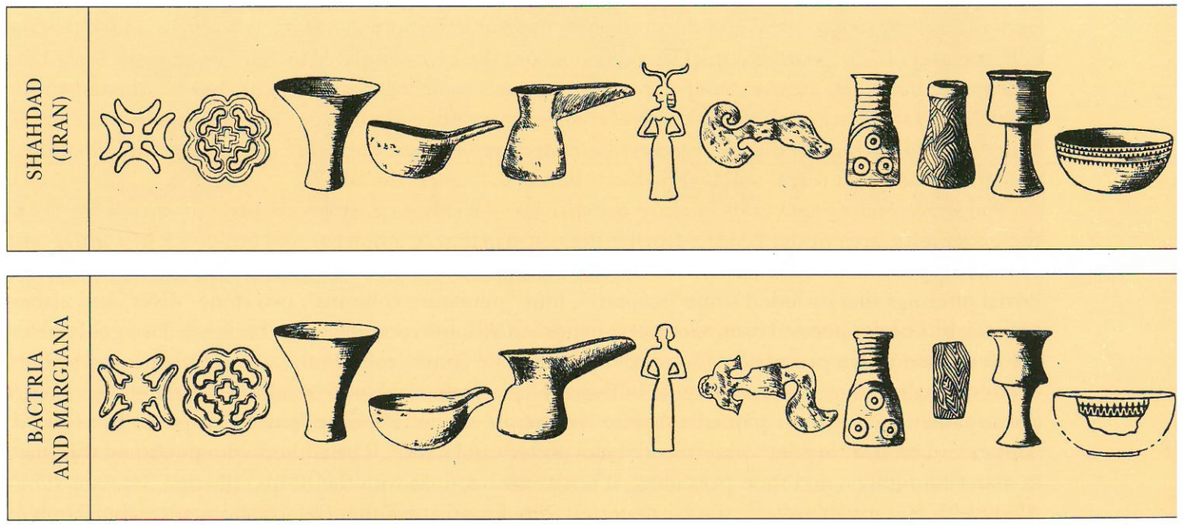


Fig. 71. Comparative table: Bactria-Margiana and Shahdad.

and steatite seals, pins with shovel-like tops, as well as in cylinder seals with similar iconographic images of winged deities with bird faces. This small but representative group of finds, especially the ceramics from Tepe Yahya, appears to be "imports".

The materials that followed the Namazga V complex are at present better and more completely known in Margiana rather than in south Turkmenistan, Margiana representing not the "Murgab" version of Namazga VI, but rather the BMAC. It appears that the tribes that brought this kind of pottery did not settle down in south Turkmenistan. They simply left there small groups of population and then widely colonized the Murgab delta that by that time had already been partly inhabited by the south Turkmenistan tribes (Fig.71).

Margiana and Baluchistan

Until recently, our knowledge of the antiquities of Baluchistan was based only on the objects that were found in the beginning of the century. Thus, in the Khurab cemetery among the grave gifts besides the local objects there were found some "unusual" vessels including vases on stands (Stein, 1937,pl.XV.) In the dispersed cemetery of Mehi both the pottery and the whole set of grave offerings ,besides vases, include compartmented seals, mirrors, bracelets and pins (Stein, 1931, pl. VIII). They are so similar to the BMAC that it completely excludes the element of any coincidence. The miniature stone column in Kulli (Stein, 1931, pl. XI) and especially the rim (Stein, 1931, pl. XXXI) of a ritual vessel with a zoomorphic figure in relief testify to very close, even identical ritual ideas that existed in these three areas.

In 1980-1985 the south cemetery of Mehrgarh VIII revealed similar material where burials in pits, vessels and cenotaphs were found. Eight badly preserved burials were excavated wherein skeletons in a flexed position and oriented to the west were placed in rectangular pits of 3 m x 2 m. The grave offerings include cosmetic bottles with a small copper stick in the neck, as well as copper and bronze vessels, a pin with a top in the form of an open bud, a stone amulet with an image of a coiled snake, a stone "scepter", and a stone bud-shaped vessel, a mirror, numerous beads made of semi-precious stones and pottery typical of the BMAC (Santoni, 1984).

Ten kilometers to the southwest of Mehrgarh is the Sibri settlement, dispersed due to natural erosion. On its surface, among other finds, a stone miniature column, an axe-adz, copper and bronze compartmented seals were excavated. Of special interest are the cylinder seals with images of bulls and lions on the attack, which closely resemble the images on a cylinder seal from Margiana. Equally convincing are the parallels between a steatite amulet with engraved compositions including a winged animal with a reptile under its belly (Jarrige, 1985) and the designs on the amulets from the BMAC. It has to be added that the cultural level of Sibri reaches a thickness of 1.5 m and the excavated area of 1200 sq. m has revealed the remains of buildings, hearths, half-dispersed skeletons in flexed positions with heads oriented to the north; and, as in Margiana, the skeletons of children were placed into large vessels (Santoni, 1984, fig. 8). Especially interesting are the excavations of architecture of the second layer where there were found recessed fireplaces that reveal building methods similar to those of the BMAC.

The sensational Quetta finds made in the spring of 1985 have greatly enriched our knowledge about the geographic area of the BMAC. During the construction of a hotel at a depth of 3.5 m a grave with several copper and ceramic vessels was found. About 3 m to the side there was probably a cenotaph with burial offerings that included stone "scepters", four "miniature columns", two stone "disks" and alabaster vessels. The copper and bronze objects include swords, mirrors, an axe and a chisel. Two gold goblets are decorated with a procession of one row of lions. The Quetta collection is also supplemented by hundreds of small gold beads, and two gold bull-shaped pendants. It should be added that these objects were accompanied by the lower part of a steatite "composite statuette", stone "pawns", small balls, as well as copper and bronze "brazier" with traces of soot and a lead "stand". The authors who published the Quetta materials righly noted their prevailing, if not exclusive, links with the BMAC (Jarrige, Hassan, 1986). Along with Harappan pottery, similar materials were found at another Baluchistan settlement, Damboli, not far from Sibri.

At first, the corresponding materials (Kulli, Mehi, Shahi Tump) seemed isolated and were known only in south Baluchistan; now they are found in Central Baluchistan as well, thus testifying to a rather wide geographic area of a similar archaeological complex.

It is clear, that a settled farming culture related to that of Bactria and Margiana was formed in Baluchistan. In spite of the fact that at present in Baluchistan one can hardly find more than ten such sites there are sound grounds to expect in future the discovery of several dozens of new similar sites since we speak about a special Baluchistan cultural center. There exists a unanimous opinion that among the Baluchistan sites the most convincing analogies with the materials of Bactria and Margiana are found in general in Shahdad. One may have the right to question whether these similarities simply show mutual cultural contacts or are they cultural innovations related to the arrival of new tribes. In other words, if there exists a direct link between Bactria and Margiana on the one hand and Baluchistan on the other. And in this case whether it reflects a tribal movement or normal cultural relations (Fig. 72).

The main investigator of the antiquities of Baluchistan, J. Jarrige, explains the clear similarities among the BMAC, Baluchistan, north-east and east Iran by identifying the similarities as the reflection of local traditions that were influenced by the urban centers of Mesopotamia, Elam and Indian civilization. In his opinion, at that time a great significance was attached to the control of the international commercial routes along which the distribution of mineral resources between these areas took place. In particular, between Afghanistan and Pakistan, the Bolan Pass had a strategically important significance. It was this

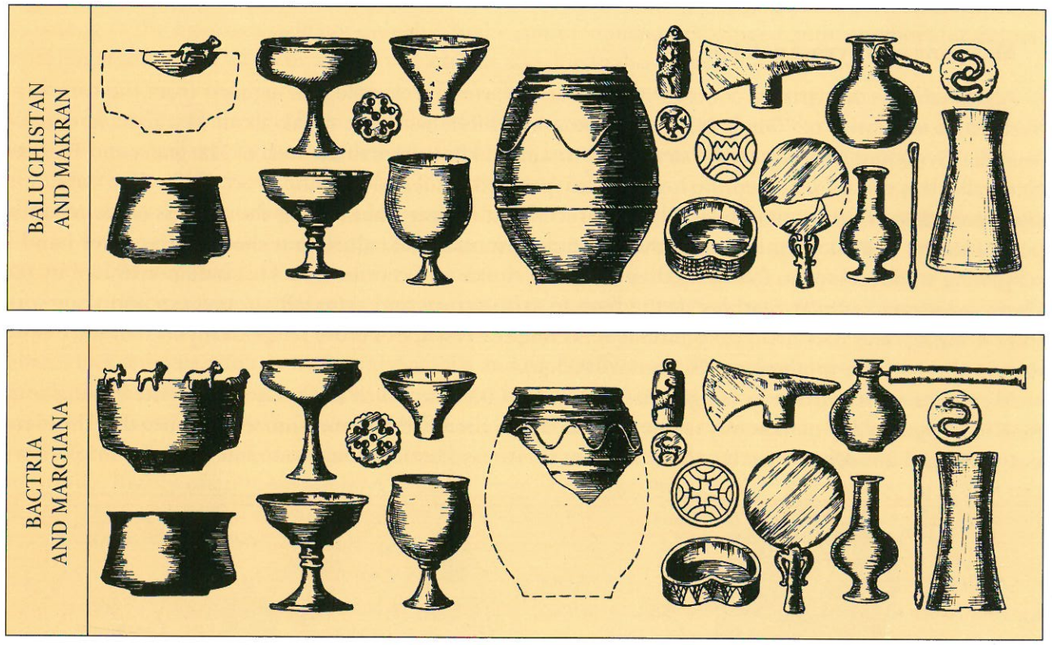


Fig. 72. Comparative table: Bactria-Margiana and Baluchistan-Makran.

route over which the most valuable minerals of Baluchistan passed into international trade and reached Mesopotamia via Afghanistan and Iran. Since Mehrgarh, Sibri and Quetta are located near the Bolan Pass, their inhabitants could, in his opinion, control all the goods and half-finished products that travelled through this passage. In its turn, this led to close contacts between the Baluchistan population and the Iranian plateau and the south of Central Asia, a fact that explains the similarities mentioned above between the BMAC and Baluchistan. It has been assumed that these Baluchistan complexes reflect infiltration of tribes from Bactria and Margiana (Fig.73).

These conclusions being very important and quite reasonable, we can still accept another approach to the interpretation of the available archaeological material. The archaeological discoveries made in "Outer Iran" in recent decades have resolutely changed our interpretations of the ancient history of the tribes that had inhabited it in the second millennium B.C.

After the discovery of the splendid Bactrian antiquities, it became clear that the materials from Hissar III should not be treated as something unusual and exceptional. Hissar III just represented one of the points of the wide range of the existence of the BMAC. Undoubtedly, another such center existed in ancient Margiana. The materials from Shahdad and especially its grave complexes mark the next point of the similar culture. And finally, on the Indian Subcontinent we face another point, in the Baluchistan center. In the future one should expect the discovery of some other local centers of one common archaeological culture that is now best of all represented in the BMAC.

The existence of local variants cannot conceal the general principles that unite all the centers mentioned above. The extremely close cultural community is very clearly expressed in the similar, even identical, forms of the unpainted pottery, in pins and cosmetic bottles, compartmented seals, stone amulets and cylinder seals, "miniature columns", in "weights", "scepters", stone composite statuettes, kidney-shaped vessels and in many other objects. We face a common archaeological complex that existed in the vast territory of "Outer Iran" but cannot yet clearly trace its origin. On the other hand, we note many clear parallels (not only in the material but in the ideological beliefs as well) that go far back to the Syro-Anatolian region which one might suggest as their common origin.

Margiana and Syro-Anatolia

All the above comparisons concern complexes of various archaeological artifacts from the comparatively close territories of "Outer Iran". The situation differs when we speak about Margiana and Syro-Anatolia. Syria and Anatolia are located many thousand kilometers to the west of Margiana and Bactria. Naturally, this situation caused the loss of many paleoethnic features in the process of a slow migration and penetration of tribes in a general east direction. It is clear, that during the process of assimilation people rather easily lose and change their traditions in material culture but show on the other hand a surprising stubbornness in following their religious rituals and ceremonies. This is demonstrated by the above mentioned similar features in the temple architecture and especially in glyptics and seals with their drawings and narrative compositions reflecting the essence of those religious myths that were common in their former motherland (Sarianidi,1993, b).

We shall hereafter refer to the glyptics and seals of Bactria, which are better represented in this area than in Margiana due to its scanty material. It has been already mentioned more than once that the identical seals and amulets of Bactria and Margiana (P. Amiet,) besides their common center of origin have

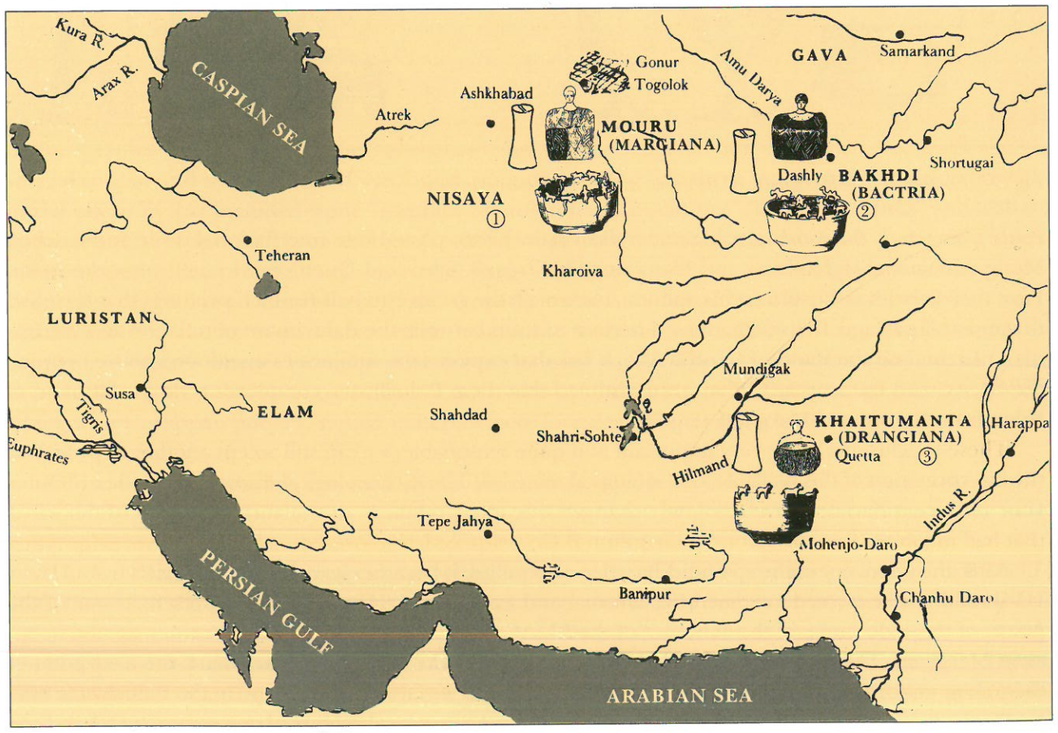


Fig. 73. Map of distribution of the Bactria-Margiana Archaelogical Complex.

the same designs that are often repeated. The Bactria and Margiana potters used motifs and subject compositions that have an undisputed Hittite-Mitannian origin.

P. Amiet, the first and main investigator of the Bactrian glyptics, rightly observed its closer connections with Syro-Anatolia than with Mesopotamia (Amiet, 1989, p. 172). In her turn D. Collon, who studied the Margiana amulets, reached the definite conclusion that at least a part of them was inspired by the contemporary seals from Syria (Collon, 1987, p. 142), this statement being now confirmed by the new materials (Sarianidi, 1989).

In his time ,W.Ward had already suggested sorting the Syro-Hittite seals into two main styles: the Babylonian and the Egyptian (Ward, 1910, p. 270). The Bactria and Margiana glyptics in general form seems to belong to the Egyptian style not only due to the common images of winged anthropomorphic deities, kneeling figures with bird's or animal's heads but also due to the over-all composition.

It seems, that all the specialists are unanimous in their opinion that there exists a general similarity in images on seals and amulets from Bactria and Margiana on the one hand and Syro-Anatolia on the other. Below we shall refer to new evidence based on the materials from Bactria and Margiana.

"Master" or "Mistress" of Animals. This group mainly consists of copper and bronze seals on which there are centrally located naked or half-naked female or male figures (sometimes, with wings and bird's heads) holding different animals by their hind legs. Similar compositions are found in the Akkadian glyptics of Mesopotamia but there the personages are always depicted naked and straight facing the viewer. In Bactria and Margiana the figures are also frontally depicted but here they are mainly half-naked and always with a head turned in profile. In the Mesopotamian glyptics these personages almost always lack animals, while in Syria and Anatolia and especially in the Mitannian glyptics they are most often depicted holding animals (more rarely, birds) by their hind legs, thus symbolizing the idea of a "Master" or "Mistress" of animals (Porada, 1948, no. 1030, 1031 and others; Contenau, 1922, no. 182). Moreover, like the Bactria and Margiana objects, the Syro-Anatolian ones are always shown with heads turned in profile. Rather often these are bird's heads (Osten, 1934, no. 364; Beran, 1967, tabl. 8, no. 77), a fact that leaves no doubt as to their similarity. It should also be added that people, and especially bird-people, holding animals by their hind legs are popular compositions in the Mitannian glyptics.

The anthropomorphic deities who are either standing or seated on real or fantastic animals were very widespread in the Syrian and Mitannian glyptics. E. Porada has definitely compared them to the seals of the Cappadocian style and in Anatolia they make up about one quarter of the excavated objects. Especially representative are the Mitannian seals with images of a man with two eagle heads who holds two animals by their hind legs (Teissier, 1984, fig. 590). Though exactly the same compositions have not yet been found in the BMAC, very representative is one Bactrian silver gilded axe that was cast in the shape of a man with two eagle heads who is fighting a lion-like monster and a wild boar (Pittman, 1984, fig. 36). Already B. Brentjes has called attention to the bird legs of this monster, which can be interpreted as direct evidence of the links with Mitannian art. Moreover, the compartmented seals and amulets of Bactria from the private collections of J. Rosen are also decorated with the same anthropomorphic personages with two eagle heads who are proudly seated on animals.

Perhaps the same Syro-Anatolian traditions are reflected in the well known images of half-naked anthropomorphic personages with two eagle heads and dressed in long skirts in the Mycenaean-Minoan glyptics. Some of these personages hold animals by their hind legs (Collector's Journal, 1981, p. 42). The Mitannian glyptics is characterized by well balanced compositions with a naked (often, winged) man and two pairs of animals that he holds in his both hands. The Mitannian glyptics reached Elam (Muscarella) and the BMAC, as is clear from the data mentioned above.

The earliest compositions of a "Master" or "Mistress" of animals are found in Achemhoyuk (1800-1750 B.C.). This means that the most probable center of the origin of this composition was Anatolia from where it travelled to the Aegean world on the one hand and on the other hand reached Bactria and Margiana via Syria and Elam. Additional evidence of the Anatolian origin of this design are the finds from the Degirmantere settlement where the most ancient of the known images of bird-people belong to the eve of the fifth-to-fourth millennium B.C. (Esin, 1994, fig. 13(15).

God of Vegetation. The early cemetery that is located in the distance of Gonur has yielded a cylinder seal (Fig. 30, No. 3) with a nude figure with sprigs of vegetation sprouting from the body. Absolutely the same image that reflects the influence of the Akkadian glyptics of Mesopotamia was also found in Shahdad and Yahya Tepe and is described either as deity Ningishzidda (Amiet, 1986, fig. 132) or as Dumuzi (Lamberg-Karlovsky, 1981, p. 392).The Margiana find alongside the previous ones testifies to the existence of an "Outer Iran" style that shows traces of the western influence. The images of such deities on the cylinder seals from the Tod Treasure in Egypt undoubtedly testifies to its imported origin from the territory of "Outer Iran".

Kneeling Anthropomorphic Deities. The image of kneeling anthropomorphic deities is portrayed on the most characteristic group of amulets of Margiana and especially of Bactria where the central place belongs to the anthropomorphic personages with bird heads (sometimes, clearly seen eagle heads) that are in some cases replaced by animal heads. Most of them are presumably female personages (one case shows a woman with a naked breast) that are half-naked, in a short skirt, often with a double belt with loosely hung twisted ends. The images are always canonical: in profile, kneeling, with the torso turned en face (in isolated cases, the whole figure is in profile). About half of the Bactria and Margiana figures have one arm lifted, while the other arm is down. One quarter of the remaining images have both hands up and very rarely they are both down. The heads are often decorated with a smoothly curved comb, in rare cases wings are seen behind the figures and sometimes arms are replaced by wings.

It has already been mentioned that there is such an astonishing similarity between the kneeling figures on the Bactrian amulets and the so-called spirit-genius of the Syrian glyptics that P. Amiet has rightly said: "It is difficult to suppose that these figures have appeared independently in these countries" (P. Amiet, 1978, p. 162). It is important to notice that the element of coincidence must be completely denied since the similarity is traced not only in the general iconography but also in style and in such details as combs or crests on heads, double belts on waists and wings instead of hands.

The most ancient images of this kind are noted in the Syro-Hittite glyptics. There are recognizable human figures with animal heads and it is credible that they could have reached Bactria and Margiana from the former area. It is remarkable that so far such images have not been found either in Mesopotamia or on the Iranian plateau, a fact that leads us to assume the existence of some other ancient routes linking Syro-Hittite glyptics with Bactria and Margiana, besides the traditional commercial ways through the Tigris and Euphrates.

Heroes and Dragon Fighters. The heroic figures are mainly represented in copper and bronze and on compartmented seals, always centrally located in the posture of a standing naked male figure (sometimes, with a bird's head) that holds a pair of coiling snakes in both hands. We would be more precise if we call them snake-dragons since in rare cases such coiling snakes are depicted on seals and amulets as winged reptiles.

These heroes (and judging by their horns they are idolized)are usually depicted standing en face with their heads turned in profile and only in isolated cases they are either enthroned or seated in an armchair and always hold a pair of snakes. On one Bactrian seal a horned standing hero fights a five-headed hydra, recalling the subjects of the Akkadian glyptics (Pittman,1984,tabl.26,b). From the most ancient times heroes fighting snakes (or snake-dragons) were rather popular in the Near East. This is demonstrated by the north Mesopotamian site of Tepe Gawra (where such personages have birds' heads) and from there this subject could have reached Elam where this motif was equally widespread. Having in mind the indisputable links of Elam with Bactria and Margiana one can suggest that this subject was most likely brought to "Outer Iran" by the immigrants who came from the west.

Acrobats. This theme was in earlier times absolutely foreign to Central Asia but is very clearly represented in the Margiana glyptics. One cylinder seal depicts an acrobat jumping over a pole that is held by persons with monkey heads. To a certain degree, this recalls the similar images of the Syro-Hittite glyptics (Contenau, 1922, no. 312). They are known not only in Syrian glyptics (Buchanan, 1971, p. 1) but in Mitannian art as well, where compositions with jumping acrobats are found (Porada, 1979, fig. 15). On the Margiana cylinder, among its personages is a musician also with a monkey head that plays a tambou-

rine closely resembling the "choir of animals" in the Syro-Anatolian glyptics (Parrot, 1961, fig. 100). Additional parallels are found in Tell Halaf where there is an image of a monkey playing a tambourine, and especially in Bogazkoy where a man with a goat's head is depicted also playing a tambourine (Boehmer, 1983, tabl. X, No. 25). The invariable participants in the Hittite religious scenes are musicians, among them those who play a tambourine being the most popular image. Especially representative is a vessel from Inandik tepe that is decorated by a composition probably on the theme of a "sacred marriage". The scene depicts an acrobat jumping in the air to the accompaniment of a dulcimer and tambourines (Ozguch, 1988, p. 100), a theme that clearly recalls the scene on the Margiana cylinder seal. Another personage on this Margiana seal holds in his hands a "scepter with balls", a symbol so popular in Mitannian glyptics (Porada, 1948, No. 1012, 1013).

Another Margiana amulet has preserved a scene where an acrobat is jumping over a running bull, this together with the facts mentioned above testifies to a considerable stability of this subject in the Margiana glyptics. So far, such compositions are unknown in South Mesopotamia, Iran, and Afghanistan, but are found in Syria where they could have appeared under the Mycenaean-Minoan influence (Porada, 1985, p. 98). However,there exists another point of view on the Syrian origin of this motif (Rice, 1998, p. 161). For the subject of our study it is important to note that the bull-leaping theme was characteristic only for north Egypt, Syria and Crete and that the Margiana compositions mark the most eastern point of its distribution from the general center located somewhere farther to the east (Sarianidi, 1994, a). Under the same influence the scenes of tauromachia appeared not only in Margiana but in the Harappan civilization of the Indus Valley (Fairservice, 1971, p. 276).

Snakes and Dragons. Snakes and dragons are the most popular images of the Bactria and Margiana glyptics. Moreover, they played a very important role in the local mythology. They are often depicted under the bellies of real or fantastic animals always trying to reach their hind legs. This scene reflects the general idea of stealing the "semen of life" that symbolizes life on earth. Snakes and dragons were also popular in Elam and north Mesopotamia (Tepe Gawra) as well as in Anatolia (Arslan Tepe) where they are depicted under the animals' bellies (Tobler, 1950, tabl. 46, No. 125, tabl. 48, No. 156; p. 61). It has been suggested that this motif could have penetrated into Elam most probably from north Mesopotamia at a very early stage and from there it was taken to west Iran (Coldwell, 1976). Coincidentally, in Anatolia (Arslan Tepe) and north Mesopotamia (Gawra), snakes are very often shown in the posture wherein they are trying to reach the hind legs of goats or rams (Buchanan, 1967, tabl. I, No. 10; tabl. II, No. II). This fact can be interpreted as an indication that it was this region where as early as the fourth-to-third millennium B.C. the "phallus symbolism" (in the words of P. Amiet) was popular and that from here it was later imported to Bactria and Margiana.

Quadruple Spirals. A very popular motif on the Margiana amulets is the design of a quadruple spiral that had neither beginning nor end; very often these spirals are composed of horned snake-dragons that are eating each other. Though this type of spirals in general was known in ancient eastern art, the closest analogies are so far found only on one bitumen plate from Elam where there are pairs of interlinked snakes that bite their own tails (Osten, 1926, p. 405-410). In its turn there has already been mentioned (Contenau, Legrain) the clear but so far hardly explained link of such spirals between Elam and the Hittite kingdom.

On the other hand, similar four-petal trait patterns were found in the Mycenaean and Minoan glyptics (Matz, 1981, tabl. II, No. 4) where they were also most likely inspired by the Hittite glyptics. In Mesopotamia in such a form they are practically never found, but in Anatolia (Kanish, Alishar, Bogazkoy) they are represented by simple trait pattern that had neither beginning nor end (Alp, 1968, No. 206 (207; Boehmer and Gooterbok, 1987, tabl. XIII, No.133; Ozguch, 1959, tabl. V. b.).

As has already been mentioned, it is difficult to determine the practical routes of cultural connections between the Hittite kingdom and Elam, connections that are clearly demonstrated in the similarity of their glyptics (Beran, 1986, tabl. 8, No. 81; Osten, 1926, pp. 405, 411). Perhaps the coiled snakes of the Middle Egyptian kingdom could have influenced the appearance of similar motifs in Anatolia which then spread as far as Elam, Bactria and Margiana. In any case, E.Mackay has observed that one such trait pattern on the seal from Chanhu Daro was... "practically identical to the so called Hittite seals" (Mackay,

1967, p. 114). Probably the post-Harappan seal as well as those of Bactria and Margiana that have designs of trait pattern found their origin in the Syro-Hittite glyptics in the final analysis.

Rosettes. Among the designs of Bactria and Margiana one can find whorl-like rosettes made of bird and animal heads. Many more of them are spread through Anatolia (N. Ozguch, 1980, fig. III-50) as well as in the Persian Gulf (Kjaerum, 1983, tabl. I, No. 13) where they arrived from Asia Minor, in the opinion of E. Porada who was later supported by other specialists (Boehmer and Gooterbok, 1987, No. 4; Boehmer, 1986, tabl. 42 (43). It seems most likely that this motif originated in one Asia Minor center then spread farther up to the Indus Valley (Joshi, Parpola, 1987, No. 417) and to Bactria and Margiana as well.

Winged Lions. The most popular fantastic animals in the Bactria and Margiana glyptics are represented by winged lions that are very similar to those of the Mesopotamian glyptics. In Bactria, seals and amulets with images of winged animals with bird heads were found. They can be interpreted as eagle-headed griffins that are believed to have come to the Near East and the Aegean world from Egypt. They are known in the Hittite and Mitannian glyptics where they are depicted with open beaks and resemble those from Bactria and Margiana.

There are isolated finds with images of lions with human heads that to a certain extent resemble the Egyptian sphinxes. Animals, birds and people are rather well represented in the glyptics of Margiana and Bactria.

Goats and "Tree of Life". On the seals and amulets there are commonly depicted such antithetic compositions as a pair of goats flanking a centrally located tree, this being a very common design on the pottery of Margiana. Special attention should be called to the compositions where a pair of birds is sitting in a tree. It leaves no doubt as to its general Syro-Mitannian origin, since it has already been mentioned elsewhere that their appearance was directly connected with the growth of the Mitannian influence on the neighbouring regions (Frankfort, 1939, p. 185; Antonova, 1991, p. 102). In this connection such images from Elam are very representative, especially in cases wherein a poppy replaces a tree, a design that recalls the similar composition on a bulla from the Gonur temenos.

No less representative are the parallels with the similar compositions of "a mountain with a tree". The only difference is that in Elam the tree is flanked by goats while in Margiana the goats are replaced by snakes standing on their tails, this being the most popular personages of the local glyptics. One Margiana amulet has preserved the hunting scene of a mountain goat with its head turned in the direction of a hunter. This finds its indisputable parallels in Akkadian glyptics and G.Frankfort has noted that this same iconography reflected the original Mitannian style (Frankfort, 1939, p.184, fig.36) with its roots in the art of Syria.

Crossed Animals. A Margiana composition wherein two bulls are seated in a crossed position, their heads turned in opposite directions shows general north Mesopotamian and especially Mitannian parallels (Porada, 1948, p. 140). This composition finds its roots in Anatolia of the beginning of the second millennium B.C. (N. Ozguch, 1965, tabl. VIII, XII), thus marking the Syro-Anatolian region as the most probable center of origin. As yet, such images are not found in Iran in the period prior to the middle of the second millennium B.C. (Pigott, 1977), and their existence in Margiana as well as in the Indus Valley, where they obviously appeared under Mesopotamian influence (During-Caspers, 1985),leaves no doubt as to their general north Mesopotamian origin.

Lions against Bulls. The motif of fighting lions and bulls is common and on one Margiana item the two animals are separated by a design of a tree. This image finds direct analogies in Tell Brak (Buchanan, 1966, No. 803, 804 et al.) and Ras Shamra (Sheffer-Forrer, 1983, p. 14), thus making the Syrian region the most probable center of the origin of this motif. In Mesopotamia such motifs are rare, but they are rather widely represented in Elam (Mecquenem, 1934, No. 30), which marks Iran as an intermediate point of its expansion into the territories up to Bactria and Margiana on the one hand and into Baluchistan on the other (J. Jarrige, 1985).

Monkeys. Monkeys are rather widely used in the glyptics and on the seals of the BMAC though monkeys do not inhabit these areas. One could explain their portrayal by claiming influence from the Indus Valley, but they are practically never found on the seals of the Harappan civilization. These designs are

rare in Mesopotamia (where one can hardly distinguish a monkey from a mongoose) but they are popular enough in the glyptics of Anatolia (N. Ozguch, 1965, p. 47), they were believed to appear in Anatolia under Egyptian influence. As in Bactria, monkeys quite suddenly occupy the central place on the seals of the Aegean art that dates to 1700-1600 B.C. (Higgins, 1979, tabl. 20).

Rabbits. Running rabbits are found among the designs of the BMAC and they quite often occupy the central place on the compartmented seals. These images are almost never found in the Mesopotamian glyptics, but are common in the Syro-Hittite glyptics (Contenau, 1922, No. 175, 315; Sheffer-Forrer, 1983, p. 31; Ward, 1910, p. 419).

Birds. Among birds the priority belongs to eagles, depicted mainly in a heraldic pose and sometimes accompanied by birds and snakes. The flying eagle with a snake in its claws may remind us of one Mesopotamian myth about Etan and may be interpreted as a reflection of their eternal struggle. However, it should be mentioned that the most ancient image of an eagle in the heraldic pose with a snake under its wings was found in the layers of Ubaid II in Turkey (Esin, 1994, fig. 6, No. 4).

The images of two-headed eagles in a heraldic pose are of special interest since so far they have been found only in Bactria, were practically unknown in Iran and extremely rare in Mesopotamia (Buchanan, 1971, No. 285). On the other hand they are commonly portrayed on the local glyptics in Anatolia and Syria, which are suggested to be the center of their origin (Gurney, 1954, No. 8; Alp, 1968, No. 68). The similarity between the Bactrian and Anatolian images is emphasized by such characteristic detail as a pair of bands with twisted ends that flank the eagles. And in Anatolia these images are found not only on seals (Boehmer and Guterbok, 1987, tabl. 34, No. 267), but on the cliff relifs of Yazilikaya (Alp, 1968, No. 73).

Among the Bactrian seals one can find female images with "cylinders" on their heads (or some kind of horned head dresses), a detail so characteristic of the Hittite deities (Ward, 1910, p. 386, No. 884, 888, 961; Contenau, 1922, No. 154, 159; Collon, 1990, p. 48). In the Togolok-21 temple an amulet was found with an image of people lying on the earth and who are being tortured by a winged, horned monster. The whole composition especially such stylistic details as horns, paws with three fingers and a small bump on the tip of the monster have a strong resemblance to the similar composition on a seal from Anatolia (Sarianidi, 1991, fig. 52).

All the data cited above clearly testify to the general western origin of the glyptics and seals of the BMAC and these connections are rooted in north Mesopotamia reaching into Syria and Anatolia. In addition to the finds of similar compositions, this conclusion is also supported by the characteristic forms of some copper and bronze Bactrian seals with high handle-columns, a feature so typical of the Syro-Hittite seals. In the same way, the three-sided prisms practically unknown in Iran and Mesopotamia were common in the Syro-Anatolian region, the BMAC and in parts of the Indus Valley, where they have found images "atypical" of the Harappa seals. Also one should consider some stylistic details such as for example, the tooth-like decoration of the human figure outlines on the Anatolian seals of the period of the Assyrian colonies as well as on some amulets from Gonur (Sarianidi, 1993, pl. VIIIA, No. a, b.).

At present, there is every reason to speak of the prevailing parallels between the Bactria and Margiana glyptics and seals and the Syro-Hittite ones, Elam being probably an intermediate point between them. Having in mind the chronological priority of the Syro-Hittite glyptics over that of Bactria and Margiana, one can definitely speak of the influence that in its general form was directed from west to east but not the other way round.

The direct archaeological data mentioned above lead us to believe that ancient Margiana was founded both, by immigrants from South Turkmenistan, and to a greater extent, by those from the Syro-Anatolian region. The tribes from this latter area penetrated to the north foothills of the Kopet Dagh in the very beginning of the second millennium B.C. But by this time life in this area had been gradually shrinking, perhaps due to the beginning of the xerothermical period that caused the shortage of the arable lands and as a result of this some tribes migrated to the ancient Murgab delta. They were followed by tribes that came from the west and that mixed with the aboriginals thus forming the ancient country of Margush. However, the origin of Bactria is ascribed exclusively to the tribes that migrated from the far west and that most probably had Syro-Anatolian roots. At some point, a portion of these tribes moved

into south Iran (through intermediate Elam) and inhabited Baluchistan reaching as far as Quetta. Thus we face a wide tribal migration as a result of which in the territory of "Outer Iran" there were formed several centers of related tribes. Besides their mutual relations these tribes also came in contact with the local tribes that had inhabited these territories earlier. At present, the two related centers, Bactria and Margiana, are studied best of all, and we have grounds to suppose the existence of some other centers such as, for example, Baluchistan.

Finally one should draw attention to the parallels that are found even in the Mycenaean-Minoan glyptics. It is a common fact that among the seals of the Aegean world there are subjects and images strongly influenced by the glyptics of neighbouring Anatolia and especially of the Hittite world. Here one should mention the opposite influence if we refer to the scenes of tauromachia mentioned above. Now there are common themes and images in the glyptics of these areas on the one hand and of Bactria and Margiana on the other, themes that reflect one more line of connections that originated from one common center.

Among the images of kneeling figures, one Bactrian image where a woman was depicted with a naked breast has already been mentioned. This detail, being unusual for the local glyptics, clearly recalls the Mycenaean-Minoan images of female deities (Sarianidi, 1993, fig. 1). In any case an ivory plate known from Ugarit with an image of a deity with a naked breast is attributed to the Aegean influence due to this very stylistic detail.

Among the Bactrian seals there is a silver one with a half-naked woman seated on a lion-like monster that vividly recalls a similar one from Mycenae(A. Sakellariou, 1964, No. 167). The compositions of a "Master" or "Mistress" of animals are rather well presented in the Mycenaean art but one such image from the cemetery in Perati is especially representative for our subject. It shows a man holding two winged antelopes by their hind legs (Porada, 1981, fig. 4, 30), a scene which closely resembles the one on the cylinder seal from the Gonur temenos mentioned above.

Already mentioned are the scenes of tauromachia from Margiana, which most vividly recall the Mycenaean-Minoan ones and the similar compositions from Anatolia occupy the intermediate place between these two areas. In the same way Bactrian amulets with a man lying down on the earth and being attacked by an eagle remind us of the myth about Prometheus. A hero fighting the five-headed hydra on one Bactrian seal brings to mind the myth about the Lernean hydra and the snake-dragons from Bactria and Margiana swallowing people – the myth about Jason.

Besides the glyptics and seals, the similarity between the Aegean and Anatolian region and Bactria can be strengthened by specific terriomorphic vessels found in both areas. In the plundered tombs of Bactria besides these vessels there was also found a copper and bronze cosmetic bottle with a "banquet" scene where animals including monkeys were the main figures depicted (Sarianidi, 1993). To a certain extent this scene recalls some known Greek compositions with the exception that monkeys there were replaced by personified lions holding vessels. Such cult servants with vessels for libation were known in Egypt, Anatolia and Syria (Mellink, 1987). Now they are also found in Bactria leaving no doubt in their general similarity and assumed origin. It is significant that linguists came to the same conclusion and for example such an outstanding specialist as A. Parpola very rightly said that the so called "Nestor's goblet" from the grave in Mycenae bears an image of eagles with spread wings that directly corresponds to the same images on the goblet from Bactria.

One realizes that these parallels are rather fragmentary and not very numerous, but they should not be ignored as in the course of time the newly accumulated material gives more evidence of the existence of mutual analogies between the Bactria-Margiana and Mycenaean-Minoan data. Thus, quite recently in Bactria there was found a cylinder seal with an image of an owl, a rather rare personage, so far found only in the art of ancient Greece. However, there are no grounds to draw a direct link between the Bactria-Margiana and Mycenaean-Minoan glyptics. The parallels between them assume the existence of a common center of their origin located in some intermediate (most likely, a Syro-Anatolian) territory. The above-mentioned factual material is published for the first time and so it would be correct to give its historical interpretation here. In fact, these materials lead us to offer a new interpretation of those historical events that concern not only Bactria and Margiana but the whole Near East.

MARGIANA AND THE INDO-IRANIAN PROBLEM

CHARTER V

The above-mentioned materials make it possible to reconsider the seemingly eternal question of the Aryan invasion and the decline of the Harappan civilization of the Indus Valley in the light of new archaeological data. First, we would like to review briefly the main points of view on this very intriguing problem of the ancient history of Central Asia and the Indian Subcontinent. At present, the decline of the Harappan civilization is explained by: 1) enemy invasion, 2) natural catastrophe, and 3) change for the worse in the environment. Indeed, the first wide-scale excavations of the upper layers of Mohenjo-Daro showed some clear signs of the decline. The regular urban plan was replaced by careless house construction. Potters' kilns and small shops appeared on the former main streets. The same is also true for Chanhu Daro where between the last two periods one notices a clearly expressed gap in the architectural traditions: houses have no foundation, instead of a regular urban plan they are unsystematically located over the whole area. Also in Harappa one can see some signs of the exaggerated attention paid to the city's defense, an indirect indication of some foreign danger. And finally, in the ruins of the lower city of Mohenjo-Daro there were found several groups of skeletons that in the opinion of some specialists could have been victims of the invasion.

It may seem that these skeletons speak in favour of the hypothesis of a foreign invasion but one single fact can not be decisive in the argument. Besides there is basis for the assumption that at least some of them died several years later than the end of Harappa. One group of 14 skeletons undoubtedly belongs to the Harappan period though it should be mentioned that these skeletons are separated by an earthen layer of 15 cm (Jarrige, 1973, p. 273). The stratigraphical position of the cemetery proves that buildings of the late Harappan period were built on top of it which means that the cemetery belonged to the previous period. And though the upper horizon of Mohenjo-Daro has revealed 5 skeletons buried under the ruins of collapsed bricks they can equally be either victims of murder or of the building collapse (Marshall, 1931). In any case, in the opinion of some authors these skeletons were victims of robbers who plundered the agonizing city rather than victims of an invasion.

According to the second theory, the decline of the Harappan civilization is explained by natural cataclysms. The complex of geological changes and particularly the formation of a natural sand dam in the main bed of the Indus River brought an end to the urban culture.

True, to a certain extent natural factors might have influenced the decline of the Harappan civilization. This idea is supported by information out of Strabo (XV. 1. 19) that is based on the evidence of Aristobules who had visited the Indus Valley in 326 B.C. and found there "...a country of over a thousand cities and villages that were abandoned by their inhabitants because the Indus has left its former bed and moved to another deeper one and now impetuously runs like some cataract". Based on this information some authors reached the conclusion that the level of water in the Indus River had risen much higher due to some tectonic shocks and that these geological events caused the submersion and decline of the cities. However, such a conclusion has met sharp criticism on the part of some specialists (Lamberg-Karlovsky, Possehl).

A third theory explains the end of the Harappan civilization by the shortage of economic resources. This made the local people leave the long-settled lands and move far to the east, mainly to the Ganges Valley (Wheeler, Fairservice) in their attempts to find new rich lands. The supporters of this theory say that the intensive form of agriculture could have caused the exhaustion of irrigated lands. But it has already been mentioned that during the periods of high-flood the Indus River yearly brings so much silt that the fertility of the valley can be restored very easily.

A further argument is that the evolution of the society as well as the considerable extension of its inhabited territory could have caused a certain degeneration of the culture. This process was accompanied by the weakening of trade contacts with Mesopotamia (Bongard-Levin).

So far, we have discussed some general changes that mainly concerned the architecture of the final phase of such capital cities as Harappa and Mohenjo-Daro. Meanwhile, as early as the beginning of our century a distinct archaeological complex was excavated over the Harappan layers in the Jhukar settlement not far from Mohenjo-Daro. Later this complex was found in many settlements of Sind, including the south part of the country. J. Jarrige wrote that in spite of the fact that the "Jhukar" materials from Mohenjo-Daro have not been published, the local museum possesses some pots of the Jhukar culture

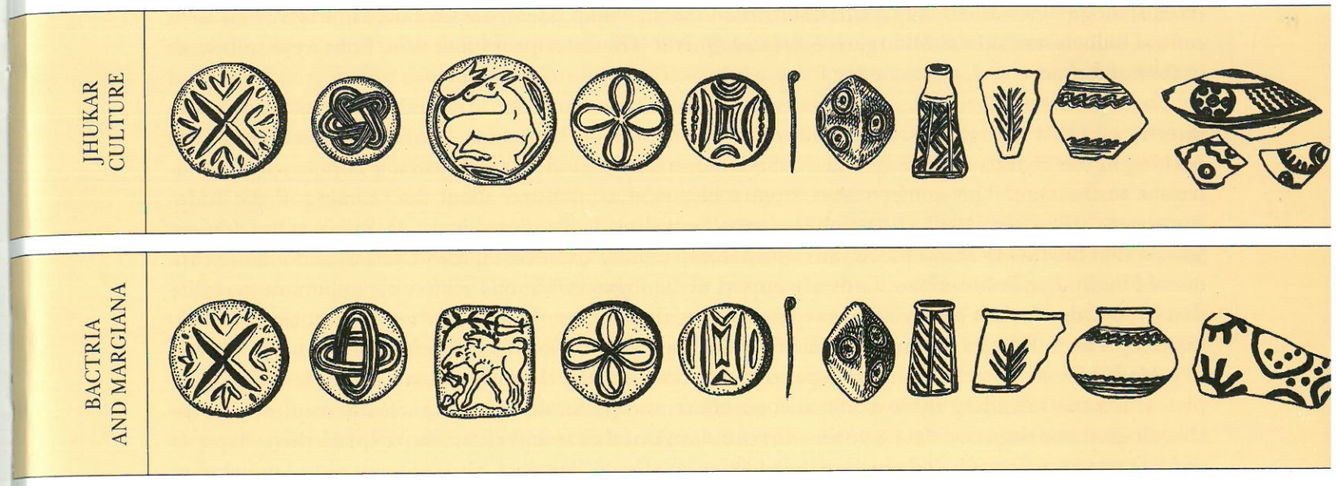


Fig. 74. Comparative table: Bactria-Margiana and the Jhukar culture.

(Jarrige, 1973, p. 279) that indirectly indicate their origin from this distinct site, having in mind the territorial closeness of the two sites. Unfortunately, the corresponding materials from Chanhu Daro were very badly degraded as a result of natural erosion. Nonetheless, here too the typical Harappan layers were covered by very clear post-Harappan ones that in their turn correspond to the Jhukar culture. All the authors unanimously think that the Jhukar layers at Chanhu Daro and other small sites of the Sind were left by immigrants. According to S. Piggott their pottery shows a combination of the ceramic traditions of the Kulli culture and of the Harappan culture itself.

In the opinion of S. Piggott, this distinct archaeological complex has a south Baluchistan origin on the whole. This assumption is substantiated by the seals of "Jhukar style" made of ceramics, faience, stone and metal that differ sharply from the Harappan ones, showing at the same time western parallels. E. Mackay and especially S. Piggott were the first to call attention to the western analogies in the Jhukar culture and pointed out the links among the Shahi Tump cemetery, Hissar and Anau. As we have already mentioned, the materials of these sites in their turn are very typical of the BMAC. Also it should be added that zoomorphic images with inscriptions on the seals of the Harappan civilization give way to mainly geometric motifs of crosses and especially of swastikas, the latter showing clear analogies in the glyptics and seals of the BMAC (Fig. 74).

In light of the new discoveries in Bactria and Margiana we can trace generally similar elements between the Jhukar culture and the BMAC. This similar material includes biconical steatite "spindle whorl" with circular ornamentation, copper seals with swastikas, as well as the already mentioned faience "seal ring" with a cross-like decoration that precisely copies the similar one made of faience from Chanhu Daro (Mackay, 1967, pl. L, I 17). We deliberately omit the parallels between such objects as axes, swords or pins. They had spread widely and steadily in the Iranian and Baluchistan frontier zone during the previous period and could have reached the Indus Valley as a result of trade or exchange. Equally, we avoid mentioning such a specific ceramic form as vases and goblets on high stands that are well known in the Indus Valley as early as the Harappan period besides being popular in Bactria, Margiana and Baluchistan.

However, we must mention the similarity in the architectural plan and construction methods that by no means could be accidental. The people of the Jhukar culture like those of Bactria and Margiana had no real cities but lived in settlements that had a horizontally random plan as it was excavated in the upper layers of Harappa and Chanhu Daro. Nevertheless, the buildings of Chanhu Daro are far from being primitive and their recessed fireplaces that are identical to those of Bactria and Margiana speak for the high level of the construction art.

Even this limited set of finds testifies to the links between the Jhukar culture and Baluchistan. Earlier

these analogies concerned only south Baluchistan (Shahi Tump, Mehi) but now the same is true for such central Baluchistan sites as Mehrgarh-Sibri and Quetta. The latter prove that these links were still closer in time and space.

These purely archaeological data find support from some linguists, first of all from C. Renfrew who directly says that though Dasas are believed to be enemies of the Aryans, "As far as I can see, there is nothing in the Hymns of the Rigveda which demonstrates that the Vedic-speaking population were intrusive to the area. This comes rather from a historical assumption about the "coming of the Indo-Europeans" (Renfrew, 1987, p. 182). Based on other purely linguistic evidence, C. Renfrew has demonstrated that the theory about the Aryans who are said to have come on military chariots and to have conquered the Indian Subcontinent finds no support in the Rigveda. For our subject it is important to realize that even if the Aryans had really come on chariots, this does not necessarily mean that they were nomads (op. cit., p. 182). As for the downfall of the Harappan civilization, C. Renfrew (contrary to the opinion of J. Marshall and Wheeler) in his independent way, came to the conclusion that it was caused by a complex of reasons including those of climatic, economic and political origin. As is clearly seen, neither archaeological nor linguistic data give any direct indications that would allow us to explain the collapse of the Harappan civilization as a result of the military invasion of Aryans.

At present, two theories explain the arrival of the Indo-Aryans on the Indian Subcontinent. According to one theory, they were nomads genetically linked with the steppe Andronovo type tribes (J. Mallory, E. Kuzmina), while the other theory claims that they were tribes from the ancient farming centers of the Near East (T. Gamkrelidze, V. Ivanov).

On the other hand, linguists seem to be more likely to support the idea that the ancient population of Turkmenistan of the Anau III (Namazga I-VI) period probably spoke the Indo-Iranian language (Diakonov, 1985, p. 55) and that "in the beginning of the II mil. B.C. the language of the Iranian plateau, the Indus Valley and of Turkmenistan was mainly the Indo-European one" (Renfrew, 1978, p. 194).

Coming back to the archaeological data we can say that the Jhukar culture belonged to the circle of the Baluchistan cultures of the Mehrgarh-Sibri type. Perhaps, it marked their late, dying out phase that found its reflection in glyptics, seals and construction methods. Future excavations will probably widen and supplement the range of the assumed analogies and this will fill up the gap between the Jhukar culture and Mehrgarh-Sibri sites. Equally important, in spite of the disputability of the problems of the absolute chronology, the above mentioned relative synchronization of the BMAC and Hissar IIIC remains true. This statement may apply to Mehrgarh-Sibri as well, an idea that corresponds to the old opinion that the Jhukar layers of Mohenjo-Daro and Chanhu-Daro should be dated to the beginning of the II millennium B.C. (Dyson).

The first studies of the Jhukar culture have revealed its general western roots, and neighbouring Baluchistan most probably was the origin of the population that intruded into the Indus Valley. The problem that we are trying to solve concerns the reasons and character of this foreign invasion into the Indus Valley. Typically, in Baluchistan the layers with the material of the BMAC type are always located on the top of sites and mark the final stage of the existence of these sites. Moreover, it is noteworthy that the origin of the Mehrgarh-Sibri complex coincides with the decline of such settlements of the Bronze Age as Mundigak and Shahri Sokhta. In other words, this decline coincides with or just precedes the appearance of the Mehrgarh-Sibri complex. In this case the stratigraphical data of Tepe Yahya are rather representative. There the IVA layer sharply contrasts with the ones below and is characterized by new forms of pottery that had replaced the old painted ceramics. These new forms find no clear analogies in this region (Lamberg-Karlovsky, 1970, fig. 14-20) but closely resemble the BMAC pottery. This is additionally proved by the find of a cylinder seal from the Gonur cemetery in 1997. It depicts a seated goddess of vegetation (Fig. 27, No. 3) and finds its analogies in Shakhdad and Yahya Tepe (P. Amiet, 1997, fig. 2, 3). Settlements with a similar complex are known to the south of Yahya along the Persian Gulf coast as well as in a number of settlements of southwest Iran (Lamberg-Karlovsky). This indicates the wide range of the assumed tribal migration. From the stratigraphical data one could form the impression that this intrusion was preceded by a period of temporal desolation of Tepe Yahya. It looks as if there is every reason

to imagine a dramatic situation wherein a military invasion of newcomers caused the collapse of the settlements. But first of all it should be mentioned that Mundigak was not absolutely desolated, it just became weaker. A similar situation was true for east Iran and south Turkmenistan. It is true that most suddenly (in the beginning of the II millennium B.C.), life in these areas shrank sharply, but the reasons for this event remain unclear.

An Italian archaeologist R.Biscione has pointed out the wide scale of similar changes in the given areas and G. M. Bongard-Levin clearly says that "...these qualitative changes in Iran, Afghanistan, Central Asia and the Indus Valley were based on similar or identical factors" (Bongard-Levin, 1985, p. 110). Specialists are unanimous in characterizing the events that simultaneously took place in these areas at the beginning of the second millennium B.C. They differ only in their historical and cultural evaluations of the facts.

At the south Turkmenistan sites these changes correspond to the final phase of the Namazga V complex when not only such small sites as Shor-Depe, Taichanak-Depe, Kosha-Depe but also the capital ones of the Altyn-Depe or Namazga-Depe type were deserted and abandoned. Some of the inhabitants of these settlements could have migrated and started the colonization of the Murgab delta. Namazga-Depe sharply shrank in size, its living area hardly reaching two hectares. Other settlements continued to function but in some of them such as Ulug-Depe at Dushak the scale of life sharply contracted while the others such as the south mound of Anau, Tekkem-Depe remained small settlements. Thus, at that time the historical development of the south Turkmenistan tribes represents a complex scene which is explained either by the xerothermic period or by the invasion of militant nomads from the Central Asian steppes.

Especially noteworthy in this connection are the data of a related science —the most noteworthy being the conclusion reached by the geomorphologist, V. M. Trubichin. He says that the late Quaternary transgressions and regressions of the world oceans are known to have a glyacioevstatic nature. The periods of climatic optimum, that is the periods of the maximum heat and humidity, and simultaneous maximum rise of the sea level of the world oceans were replaced by periods of cooling, reduction of humidity (becoming desert) and regression (the fall of sea level) of the world oceans. About 4500-4200 years ago a considerable aggression took place, reaching its peak at about 4000 years ago. The following period was characterized by a gradual rise in heat, humidity and by transgression of the waters. This scheme is true for the whole of west Eurasia. The study of the late Holocene deposits of the Caspian regions of Turkmenia has confirmed the existence of the same situation in Central Asia. The peak of the so called new Caspian transgression falls into the period about 5000-7000 years ago and this was also the period of maximum humidity.

The study of "takyr" deposits in the "Danatin Corridor" between the mountain chains of Kurindag and Maliy Balhan shows that the pluvial type of rainfall accumulations was replaced by the "desert-takyr" type somewhere on the eve of 4000 years ago (varve-chronology, paleomagnetic data). Later, this "desert-takyr" type of rainfall accumulation remained the dominant one here. These data serve as a good reference point for marking the humid periods (3500, 2500, 2000 years ago and so on) that shows some similarity with the world data.

In other words, drought and a sharp reduction of water in small montane rivers could have destroyed the practice of dry land farming in south Turkmenistan. This situation would have forced the population to start developing river valleys.

It seems probable that drought was the main (but not the single) reason for the described regional "crisis". One can assume that under such circumstances some of the ancient farming tribes left their long-inhabited lands and moved in the general eastern direction in search of new lands. A part of these immigrants entered the territory of south Turkmenistan via northeast Iran (Hissar III) but found there a similar ecological situation. Still earlier, the local south Turkmenistan tribes —forced by the gradual drying out of small montane rivers— turned to developing lands in the Murgab delta. It was here on the fertile Murgab land where the western immigrants mixed with the local tribes, a fact that led to the formation of a special Bactria-Margiana Archaeological Complex. The other wave of immigrants reached the great Bactrian plain in the north of Afghanistan and later south Uzbekistan, where the foundation of

the ancient farming culture of Bactria was laid. These are two branches of the same root, a fact that explains the striking similarity between the cultures of Bactria and Margiana.

The supporters of the second theory of the Indo-Aryan origin set forth some facts that deserve discussion. For instance, they absolutely rightly note that horse-breeding played an important role among the Indo-Iranian tribes but they refuse to accept the fact of the early appearance of wheeled chariots in the Iranian-Central Asian zone. Their opinion is based on the fact that the animal bones from Anau that first were determined as bones of a domesticated horse turned out to be bones of a wild horse. But it should be mentioned that paleozoologists have repeatedly said that it was very difficult to distinguish the bones of a wild horse from those of a domestic one. Also the archaeological reality does not support their opinion that images of the horse are not found in the small plastics of Central Asia.

A beautiful example of a terracotta horse head (Fig. 16, No 7) was discovered at the excavations of Altyn-Depe in the upper layers of the eve of the third-to-second millennium B.C. (Sarianidi, 1973, p. 113-117). This is attested by specialists (Gamkrelidze, Ivanov, 1984, p. 559) except for E. Kuzmina who treats it as a "two-humped camel". This definition is rather speculative since the find represents only a head and not the whole figure of the animal. Besides, the south Turkmenistan sites have yielded a large collection of terracotta models of both one-axle and two-axle chariots. Also in spite of the opinion of the same author, there are found models of wheels with painted spokes (Kuftin, 1956, fig. 27) that date to the period of Namazga V at least and in no case to a later period. In other words, as early as the beginning of the second millennium B.C. in south Turkmenistan, instead of the archaic shapes of solid wheels they used more progressive ones with spokes, this find testifying to a high level of development in wheeled transport.

In the scientific literature it has been mentioned that among the osteologic material of south Turkmenistan one does not find horse bones (Tzalkin). But this can serve as an evidence of the fact that due to its rarity a horse occupied an important place in the Bronze Age. It is a confirmed fact that from ancient times bulls and camels were used as draught animals in south Turkmenistan. However, in spite of the accepted fact that camels played such an important role in the ancient economy, it is significant that among the two thousand pieces of osteological material from the sites of the Bronze Age there was found only one camel skeleton (Ermolova, 1970, tabl. I).

The special role of the horse and a chariot is documented by an imprint of a cylinder seal from Hissar III that bears an image of a horse chariot that has wheels with spokes instead of solid ones. This was one of the first cylinder seals found in Iranian Khorasan and E.Schmidt cautiously assumes its imported origin (Schmidt, 1937, fig. 118). However, later finds of similar cylinder seals in Bactria and Margiana lead us to assume the local production of this Hissar item. This assumption is supported by cylinder seals from Bactria with images of domestically-bred (purebred) horses with thin legs (including one with a horseman) (Sarianidi, 1986), this showing once more the special role that the horse played in the Late Bronze Age. One should pay attention to the conclusion of paleozoologists who say that the horse appeared in the developed Bronze Age (Ermolova, 1986, p. 117), the period of the penetration of new western tribes into Turkmenistan. This may explain the discovery of the terracotta head of a "thoroughbred" horse in the upper layers of Altyn-Depe which dates to the very last period of life in this given site when the newcomers could have introduced the horse. In any case, there is every reason to suggest that in the neighbouring Iranian-Turkmenistan zone as early as the beginning of the second millennium B.C. there existed horse chariots that belonged to the local nobility. At that stage a horse was not used in the economy, but it played a prestigious role among the newcomers, possibly being a status symbol for the noble class of society.

Leaving aside the complex problem of the place and time of the domestication of the horse we would still like to note that the horse head from Altyn Depe (Fig.16, No 7) is assigned to the period of the appearance of the BMAC and that this fact is most likely explained by the arrival of immigrants from the Near Asia. Linguists in their turn have long ago paid attention to the so called "Instructions on Horse Breeding", Kikulli, from Bogazkoy that contains an Indo-Aryan vocabulary and some linguistic elements of Indo-European languages. Among the existing instructions on horse breeding there some written in Hittite and Assyrian (Littauer and Crowell, 1979, p. 71). All this may be looked upon as an indication of the fact that representatives of the local Indo-Iranian tribes were rather well aware of riding horses.The

fact that these instructions were written in the areas that can be most probably regarded as protohomeland of Indo-Aryan tribes that arrived in the territory of "Outer Iran" logically brings us to the assumption that these were the people who brought this exotic animal to their new homeland.

B. Brentjes points out the time gap between the assumed settling of the Andronovo tribes and the still earlier appearance of the Indo-Aryans in the Near East. According to him, the Aryans were in contact with India before 1600 B.C. and they lived in the territory of Iran before the formation of the Andronovo culture. Based on this, B.Brentjes ascribes the migration of Aryans to the first stage of the Aryan expansion at the end of the third millennium B.C.

Ignoring the chronological discrepancies we still must discuss the distinct archaeological complexes that could have been connected with the Indo-Iranians. In other words, one would expect to find in Iran, Central Asia, Afghanistan and Pakistan some related archaeological complexes, the population of which would have been linked with the Indo-Aryans. Indeed, from the archaeological point of view, if these were tribes of the Andronovo culture, their traces should have been marked in all the three zones mentioned above or at least in one of them, in the Indus Valley. But we have no direct archaeological evidence of the Andronovo culture either in Iran or Pakistan. We are far from drawing a direct link between the archaeological culture and the ethnos, but according to the accepted opinion of linguists, the striking similarity between the Iranian and Indian languages supposes such a cultural and historical relation that should have been supported by the material culture as well .

Only the BMAC corresponds to all these demands, this being confirmed by the data mentioned above . At present ,the BMAC is the only territory with the necessary archaeological material which has appeared in the distinct zone of southwestern Asia on the eve of the third-to-second millennium B.C. Probably the first reason of its appearance was the above-mentioned global migration of Aryans that like a chain reaction was followed by great changes in the whole farming world. Only wide-scale tribal migration (and not just cultural contacts) can explain the striking similarity between the Baluchistan type complexes of Mehrgarh-Sibri and the BMAC. Having found themselves in similar ecological conditions the ancient farmers remained true to their old traditions, both in their material and ideological culture. Margiana shows no direct archaeological evidence of any kind of dramatic events that could have accompanied the assumed colonization of its centers. On the contrary, the available material proves that the newcomers started to develop the new lands and partly occupied the old settlements without any objections on the part of the indigenous people. Around the middle of the second millennium B.C. the Baluchistan tribes began to penetrate the Indus Valley, a fact that is possibly demonstrated by the Jhukar culture. Unfortunately, this culture is very poorly studied but still one could assume that this penetration coincided with the global xerothermic period, or probably followed it. Traces of the post-Harappan culture were repeatedly found to the east of the Indus where the urban Harappan population was gradually settling down. Their deserted settlements could have been partly reoccupied by the tribes of the Djukar culture. However, statements regarding the supposed second settling of the Indus Valley seem very vague and should be supported by new archaeological material. But even at this stage one may say that the direct archaeological data definitely contradict the theory of military invasion, of the massacre of the indigenous people and the catastrophic downfall of the Harappan civilization as a result of the Aryan invasion.

Can all the foregoing discussion serve as evidence that the Jhukar culture people were related to those Indo-Aryans whose history so far remains unclear? There are no such data in our possession. The available archaeological facts speak only for the correlation of two historical events: the spread of the BMAC in the area up to Baluchistan and the decline of the Harappan civilization. The archaeological data correspond to the linguistic data and, which is more important, to the data provided by paleoanthropologists. According to the paleoanthropologist V. Alekseev, the first homeland of the Indo-Iranians embraced the south areas of Central Asia and the Iranian plateau.

At present, there are general parallels between the materials of the Jhukar culture and the BMAC and Mehrgarh-Sibri. The analogies include such innovations as decorations, pottery with scratched signs and ornamentation (Mackay, 1967, pl. XLVIII) as well as some small vessels (Mackay, 1967, pl. XXXIX, I 5; pl. XLIXL) that find parallels in the BMAC and are quite foreign to the Harappan civilization. The similarity in the glyptics of the BMAC and the Jhukar culture that has been mentioned above can be now

supplemented by the head of a human statuette from Chanhu Daro that resembles the stone head from Mirshade. Seen overall, these and other analogies point out the relatively close links between the Mehrgarh-Sibri complex and the Jhukar culture. But the limited volume of the available material prevents us from regarding it as sufficient proof of our assumption (Fig. 61).

Though it is clear that the links between the BMAC and the Indo-Iranian tribes mentioned above are not sufficient for solving the question of their relationship, still it looks more persuasive than the old theory linking the timber-Andronovo and Aryan tribes. J. Mallory is absolutely right when he says that: "Any putative Indo-Aryan migration into Northwest India will find more archaeological evidence constructed from parallels with Central Asia urban sites, than from parallels with their steppe neighbours." (Mallory, 1995, p. 377). But then he draws a conclusion that is fully contradicted by the direct archaeological material. He says, that "...the emergence of the historically attested Indo-Aryans or Iranians generally involves a model whereby the northern steppe tribes came to dominate those of Central Asian urban centers and having acquired the latter's material culture, penetrate farther East" (op. cit., p. 377).

In order to reconcile the contradictions J. Mallory formulated a theory, according to which the steppe tribes penetrated in southern urban oasis (apparently he means southern Turkmenistan, Bactria and Margiana) where they became dominant over local farmers.Here they had acquired the achievements of the urban culture and brought them to the Indus Valley. Thus, J. Mallory tries to answer the question why typical nomads and cattle-breeders left the traces charcteristis of the tillers. But we must say that in the most ancient history of Central Asia (at least up to the Achaemenid period including) steppe nomads never did dominate over local tillers. Indeed, the wide-scale archaeological excavations in Margiana showed that in the middle of the second millennium B.C. small isolated settlements of the steppe Andronovo type tribes emerged near the ancient farming settlements and established cultural and economic contacts with them. But there is no evidence, even an indirect one, of the "dominating" role of the steppe tribes.

The problem of the Indo-Iranians which was long ardently debated by linguists, had received new impetus with archaeological discoveries at last decade. Two mutually exclusive theories had been set forth almost simultaneously. According to the first one (Gamkrelidze, Ivanov, 1984), the homeland of the Indo-Iranians was located in Western Asia.

J. Mallory, A. Parpola and some other linguists support another idea incompatible with the first theory. According to these scholars, the homeland of the Indo-Europeans laid in the territories between the Black and the Caspian Seas (Mallory, 1989).

At the same time, all these authors unanimously believe that the Indo-Aryans (wherever their homeland might be) had ultimately come to the Indian Subcontinent. The end of Harappan civilization practically coincided with the arrival of the newcomers and, according to the majority of the scholars, it was caused by a military invasion of the Aryans.

The idea of C. Renfrew that the Indo-Aryans had come to the Indus Valley from eastern Anatolia (Renfrew, 1987, p. 207) is important for the present discussion(but only on the condition that this can be assigned to the turn of the III-II mil. B.C.). It can be confirmed by archaeological data, especially by materials from Baluchistan. In this respect we must note that many prominent linguists more and more yield to the idea that population of Turkmenistan at the end of the III millennium B.C. and —undoubtedly— in the II millennium B.C. was speaking some Indo-Iranian dialects (Diakonov, 1985, p. 55). In the beginning of the second millennium B.C. the language spoken on the Iranian plateau, in the Indus Valley and in Turkmenia was primarily the Indo-European one (Renfrew, 1987, p. 194).

Actually, we have more and more data in favour of the Near Eastern location of the homeland of the Indo-Iranians, who were primordial farmers and not cattle-breeders and nomads of Central Asian steppes. Farmers were the tribes of BMAC, as well as the tribes of the culture of painted pottery. As for Indian Subcontinent, we have no direct evidence of sojourn of the steppe tribes of Andronovo culture there.

It becomes obvious now, that none of the steppe tribes could have been the Indo-Aryans. Actually, the Indo-Aryans were tribes of traditional farmers who initially had their homeland in western Asia and who reached Indian Subcontinent and established contacts with the urban population of Harappan civilization (perhaps somehow related to them) in a process of slow and long-drawn-out migration.

In the latest years several burial grounds (dating to the period 2000-200 B.C.) with well-preserved mummies were excavated in northwestern China, in the valley of the Tarim River (province of Xinjiang). Unfortunately, the question of historical and cultural attribution of these graves cannot be solved till complete publication of the burial offerings. Still, almost all scholars are inclined to attribute these burials to nomadic tribes of the adjacent regions of Siberia and Kazakhstan.Anthropological studies of skeletons give reasons to consider the dead to be Caucasoid, i.e. the representatives of the Indo-European peoples.

But one can assume another interpretation and consider the dead of Xinjiang to be not the nomads but the tillers who reached the fertile oases of the Tarim (and probably even Ordos on the left bank of the Huanghe River) in a process of migration from Bactria.

Discovery of graves with Caucasoid, i.e. the Indo-Europeans, in the graves of Xinjiang could be probably correlated with the texts, though of to the earlier period (VI-VII cent. A.C.) but written in the Tocharian language (of the Indo-European origin, as is known) and found in this very region.

Thus, we may consider that it is a rare case when archaeological, anthropological and linguistic data instead of contradicting each other on the contrary complete one another, and help us to construct the picture of the first appearance of the Indo-European tribes in the historical arena. Apparently, one has good reasons to think that on the turn of the III-II millennium B.C. the Indo-European tribes (including the Kucheans) went from northern Mesopotamia through Iran to the territories of "Outer Iran" —Margiana, Bactria and Baluchistan. Some of these tribes continued to move in an eastern direction and finally settled in fertile river valleys of the Tarim basin and allegedly of the Huanghe.

These new complex data make us reject the old theory which connected the origin of the Indo-Iranians with the steppe tribes of the Andronovo culture and point to Asia Minor and the Near East as the homeland of the Indo-Iranians. We cannot construct in details the route of the putative migration. A supposition was set forth that they could come to China via the Altai (Harmatta, 1979, p. 194), but the before-mentioned similarity of Ordos and Bactrian seals hints at the route from the BMAC area as the most probable way.

The strongest argument is offered by J. Mallory, who states: "The Europoid mummies of 2000 B.C. or of the later period may have as their ancestors either the Afanasievo, or the Andronovo cultures and may be either Tocharians or Indo-Iranians" (Mallory, 1995, p. 382). Unfortunately, so far the author can not support his theory by concrete archaeological facts and his historical and linguistic proofs are not always precise and persuading. Nevertheless, he rightly points out the wide emergence of the steppe tribes into the farming centers in the period before 2000 B.C. and based on this reaches the conclusion that "...they perhaps came to subject the urban centers from the Caspian eastward" (op. cit., p. 378). He evidently has in mind the proto-urban centers of Turkmenistan but this conclusion directly contradicts the real archaeological facts (see above). In the same work, J. Mallory rather severely criticizes other authors' hypotheses, chiefly the hypothesis of A. Parpola who has suggested that the Xinjiang mummies could belong to the Saka (nomad Scythians).

In this connection one should remember the so-called Nestorian seals from illegal excavations of the graves in the beginning of the XX century (Moule, 1930, p. 73) that can be interpreted as an argument in favour of such a supposition. After discovery of the BMAC, P. Amiet has noted that some BMAC seals are rather similar to the Ordos ones (P. Amiet, 1977, p. 119-120). This observation has found support of other scholars (Ph. Kohl, 1984, p. 191, 243). R. Biscione, who studied the Ordos seals, has noted that they probably had some relationship to the Central Asian ones, especially to the Bactrian seals. He also adds that ceramics of northern China reminds us of Namazga VI pottery and points to discovery of remnants of silk in one grave of Sapalli Tepe (Biscione, 1985, p. 105). All these facts made him to conclude that there had existed some Road or Route between the distant areas, on which the site of Sarazm had occupied a key position: from Sarazm the way led to Fergana and then to Xinjiang in northwestern China.

It seems that the problem of the first homeland of those people who lived in Xinjiang in the second millennium B.C. will remain unsolved until the complete publication of the grave goods. Thus, the discovery of the Ordos seals from this area does not look accidental and can help in solving the problem. The spread of the Ordos seals in "Outer Iran" only, can indirectly indicate the links between their owners and the BMAC. In other words, perhaps some of the newcomers could be immigrants from Bactria and

Margiana. After a long slow migration these tribes could have finally settled down and could have begun to inhabit the fertile lands in the valleys of northwestern China.

Besides the archaeological and anthropological data no less important are the linguistic facts. It is well known that it was here where manuscripts of the sixth-to-seventh centuries B.C. were written in the Tocharian language. This language is a variation of the Indo-European and finds parallels in the Hittite language among others. In the second century B.C. the Tocharians are found in Bactria and in the Middle Ages this historical area was named Tocharistan.

Even prior to these archaeological discoveries in Xinjiang, W.Henning made an assumption that proto-Tocharians are the Guti who at the end of the third millennium B.C. were known in Mesopotamia. He said: "...if we regard the Guti as "proto-Tocharians" their nearest relatives among the Indo-Europeans would be the Hittite nations of Asia Minor" (Henning, 1978). After the Guti were expelled from Mesopotamia and went to Iran by a more or less direct route at the end of the third millennium B.C. they finally arrived in northwestern China. Henning's theory was supported by other linguists (Gamkrelidze and Ivanov, 1989, p. 16), and C. Renfrew characterizes it as "highly significant" (Renfrew, 1987, p. 208).

Almost twenty years ago W. Henning prophetically said: "Possibly the archaeologists may welcome a theory that involves considerable movements of people from Persia to the limits of China as early as close to the third millennium B.C.". In the light of finds in northwestern China this linguistic theory has been brilliantly supported, both by archaeologists and anthropologists.

It is quite clear that the newest archaeological discoveries are enough to persuade us to dismiss the old hypothesis of the relations between the Indo-Aryans and the steppe Andronovo tribes. Archaeology apart, the anthropological and linguistic data force us to believe that Indo-Aryans were related to the tribes that migrated from Asia Minor and the Near East.

The available archaeological materials allow us to determine the place of Margiana among the neighbouring historical regions or, more widely, to give a historical interpretation of those links that connected the BMAC with the whole Near East. The fact is that the existing parallels, similarities and identical matches of materials are sometimes interpreted as cultural contacts, the usual order of events for neighbouring regions, sometimes they are explained by tribal migrations within the limited area of the BMAC. Thus, it is suggested that Bactria and Margiana emerged due to the migration of the south Turkmenian tribes that colonized the basins of such river plains as Balkh-Ab in Bactria or Murgab in Margiana. The movement of the Bactrian tribes through the Bolan Pass explains the discovery of similar materials in Baluchistan (Mehrgarh, Sibri, Quetta) and of Margiana materials in southeast Iran (K.Lamberg-Karlovsky and F.Hiebert, 1992).

A profound and well-reasoned interpretation of this problem was given by P.Amiet, who thinks that the BMAC was formed under strong influence from Elam (P. Amiet, 1986), and in the light of this theory, it seems more plausible to speak of tribal migration rather than about simple cultural links (Sarianidi, 1990). In order to support this assumption, one should study the materials from the three big regions: Syro-Anatolia, Mycenaean-Minoan and Bactria-Margiana where we find parallels if not in all three of them, at least in two.

First of all we should pay an attention to the fact that in all three regions there were found such similar ceramic forms as hemispherical vessels with open spouts or vessels with complex and composite spouts (Gordon, 1951, fig. 1). In Gordon's opinion, these similarities together with the characteristic types of swords and pins, may testify to the influence that spread from Anatolia and Syria (avoiding Mesopotamia) and reached Hissar. The BMAC was discovered after this assumption was made so now this connecting line may be stretched to Bactria and Margiana.

The mutual cultural contacts are to a great extent confirmed by the terriomorphic bottles from Anatolia, Mycenaean-Minoan world and Bactria with Elam as an intermediate place between them. Over half a century ago, H. Frankfort had noted that the small terriomorphic vessels, a special type of beads and cylinder seals from Elam appeared here, and not in south Mesopotamia (Frankfort, 1924, p. 73), under the direct influence of north Syria and east Anatolia. It is significant that of all similar features the author gives special attention to the small terriomorphic vessels and repeatedly and quite rightly speaks of their Syro-Anatolian origin (Frankfort, 1924, p. 123-124). In this respect, the absolutely identical small terriomorphic vessels with high necks are exceptionally representative. The copper and bronze ones come from Bactria and Bujnurd and the ceramic ones from Margiana, which marks the most extreme point of their emergence.

In his other work H.Frankfort says that in spite of the fact that the terriomorphic vessels play the leading role in these contacts, one should not ignore the parallels in the painted ceramics of Mesopotamia and Baluchistan on the one hand, and Gansu, on the other hand, which was the frontier territory with China and Mongolia (Frankfort, 1927, p. 185, 190).

Equally significant are the strong similarities, even identical examples in some cases, of the so-called "harpoons" (peculiar copper and bronze items that look like "sabers" with curved tips) that were found in the plundered tombs of Bactria and that have precise analogies in Elam, Mesopotamia, Anatolia and Egypt (Muscarella, 1988, p. 340). Very often kings and deities depicted on cylinder seals hold these "harpoons" in their hands, one such "harpoon" has preserved the inscription of an Assyrian king. They obviously were objects with a ceremonial purpose. The fact that the same "harpoons" were found in Bactria forces us to completely deny any kind of coincidence and the discovery of similar status symbols in Susiana and Haft Tepe (Iran) is a further proof that they came to Bactria and Margiana from one common western center. These located comparisons (up to Egypt)should not confuse us since typically Central Asian compartmented seals were long ago found in Mari.The Tod Treasure in Egypt supplies us with additional evidence.It has a cylinder seal that finds its undoubtedful analogies through Elam in East Iran (Shahdad, Yahya Tepe) (P. Amiet, 1997, fig. 7) and now in Margiana, as well.

It should be mentioned that the pins found in all three regions under discussion show a rather strong resemblance. True, this resemblance bears mainly a formal character and we have no grounds to speak of precise similarity. Nevertheless, it should be said that pins with small zoomorphic sculptures are found in Myceneae (Karo, 1930, tabl. XVIII, I 245) as well as in Bactria and Margiana, and pins with a small ball are excavated both in Margiana and Troy. Besides, this similarity is proved by the pins with ribbed tops (mostly found in Bogazkoy) as well as those with loosely hung small rings that are discovered both in Margiana and in Anatolia (Boehmer, 1979, v. XIV).

A further parallel: in the whole Near East outside of Margiana and especially Bactria, one type of pins with twin heads in the form of two flat disks has so far been discovered only in Anatolia, in Kanesh. There they are defined as pins that reflect and continue the tradition of silver pins of Troy II and Biblos (T.Ozguch, 1986, p. 73, tabl. 125, I 15). The parallels of these specific pin heads are so obvious that they cannot be ignored when discussing this type of decoration.

In the earth cemetery of Gonur there were excavated gold four-spiral decorations that find their precise analogies in Syria (Mari, Tell Brak) and especially in Anatolia (Alaca, Troy II, Dorak) as well as in the shaft tombs of Myceneae (Culigan, 1964). So far, in Mesopotamia they are found only in the royal tombs of Ur and in Iran on the south shore of the Caspian Sea (Marlik). And though there is an opinion (Mallowan, 1947) that their homeland was in the regions of north Iran still one cannot ignore the opposite assumption that such four-spiral decorations from the Syro-Anatolian region have reached Margiana and presumably Bactria via Iran, as well (Maxwell-Hyslop,1989).

The same cemetery has yielded golden snake heads with crosses scratched on them that find their impressive analogies in Bactria (Gallery Nefer, Catalogue, 1993). The cult vessels of Bactria and Margiana with sculptured friezes along the rims have no direct western analogies. But vessels with modelled figures of human beings and animals were also spread only in the Aegean world and in Anatolia ,the fact that testifies to the century-old local tradition in ceramic art. In Alallakh they were found in the territory of a temple (Woolley, 1955, tabl. LVII) where they are attributed to the very beginning of the second millennium B.C. In Alallakh and Tell Brak (Mallowan, 1947, tabl. 86, I 19) there are found fragments of vessels with modelled snakes that are depicted as if they are looking inside the vessel. Similar vessels are known in Anatolia, in Kanesh, Alishar, Bogazkoy, Alaca (T. Ozguch, 1986, p. 58, tabl. 107, 108) and in the Mycenaean-Minoan culture of Greece and Cyprus (Dikaios, 1940, fig. 18), where the human figures (like those of Margiana and Bactria) have preserved hand gestures. Certainly, these comparisons do not indicate direct links with the ritual vessels of Margiana, they just define the region where the decoration of the vessel rims with sculptured figures was widely practiced. This is a paleoethnic feature of tribes that inhabited the Aegean-Anatolian and Syrian regions.

The ornamented ivory disk from the "lamb's grave" of north Gonur finds its most convincing analogies in Bactria (Dashli-3) and then in Alishar, Sultan Tepe and Kul Tepe (Lloyd, 1954, p. 106, fig. 5, I 4; Ozguch, 1986, v. XXII, I 1) as well as in the geographically closer area of Tepe Giyan in Iran (Hertzfeld, 1941, p. 40, fig. 254). In the same Margiana tomb there was found a stone scepter (over 1 m long) with a bronze top decorated with a four-loop spiral without beginning or end, a typical ornament of the Hittite glyptics. Many main personages of the seals held small scepters in their hands, but only in Yaszilikaya, Anatolia, as in Margiana, these scepters exceed 1 meter in length (Garstang, 1929, v. 24).

From the foregoing detailed parallels, supplemented by the similarity in glyptics and temple architecture between Bactria and Margiana on the one hand, and the Syro-Hittite world on the other, one can reach the very important conclusion that these analogies were characteristic of all three great historical areas: Syro-Anatolia, Mycenaean-Minoan and Bactria-Margiana. These analogies are extremely valuable since they support the theory of the general Near Eastern (and not the northern Black Sea area) origin of proto-Greeks and proto-Aryans. Indeed, the language community of the proto-Indo-Iranian and proto-Greek that is accepted by a number of linguists, from the point of view of archaeologists could have originated in the contact zone of Asia Minor (Anatolia) and Near East (north Mesopotamia), but in no case in the northern Black Sea area due to the complete lack of similar material in this zone. This language community in its turn necessarily suggests an ethnic community, as well. In this community they have various common myths, legends and religious ideas that these tribes – after their split-up and consequent migration – brought along to their new homeland.

For our subject, of great importance is the problem of the original homeland of the proto-Greeks, or in other words the place from where they came into the Greek territory on the eve of the third-to-second millennium B.C. Among the numerous theories two are the most significant: one speaks of their appearance from southeast Europe and the second significant theory names the area north of the Black Sea as their homeland. At present, the solution of this problem mainly depends on the linguistic data, which demonstrate the close similarity between the proto-Greek and the Indo-Iranian (or, in other words, Aryan) languages. Based on the fact that the Indo-Iranian languages are unknown in southeast Europe many linguists have excluded this territory as a pretender to a probable homeland of the proto-Greeks. According to some linguists, the existence of a Greek-Indo-Iranian language community is an indisputable fact that leads us to locate the homeland of the proto-Greeks in the Black Sea steppes at the end of the fourth-to-third millennium B.C. (Gindin, Tsimbursky, 1994, p. 24). It is believed that about 2300 B.C. the proto-Greeks, proto-Macedonians and proto-Phrygians started to move from the northwest territories of the Black Sea area to northwest Greece. Some portion of the proto-Greeks who reached the Propontus, changed their general direction, crossed the straits and settled in west Anatolia, near Troy. This can be demonstrated by ancient Greek words that find analogies and direct parallels only in the Indo-Iranian language. As an example, one can refer to the word "danayans" that is derived from the word "danu" (river) from the Avesta and that in its turn finds the reflection in such names of the rivers in the south of Russia, as Don, Dnestr, Dnieper, the names being Iranian in their origin. In the Avesta the hydronym "Danu" corresponds to the name of the River Syr Darya in Central Asia. In the Avesta the Scythians around the Syr Darya River are called "Danavou". The linguists have no serious doubts regarding the links between these ancient languages, and their debates mainly concern such clearly technical points as to whether the word "danu" has a pure Iranian or a general Indo-European origin. In its turn, this can make us wonder whether the migration of the proto-Greek tribes at the end of the third millennium B.C. included only one ethnic group –or instead included a number of tribes– that used the same Indo-European names. According to some linguists it seems quite probable that in their original motherland the proto-Greeks and the proto-Iranian tribes were neighbours along one of the rivers the name of which was based on the word "danu", as for example, on the River Don (M.Sakellariou, 1970) or between the Don and Dnieper.

This explains why in their Black Sea motherland the proto-Greeks were called "Danayans" ("danu"-river). Those who left the main stream of migration and turned to northwest Anatolia (locally called "Ahijava") were named "Achaeans". And thus, one can understand why in the "Iliad" the proto-Greeks are named either "Danayans", or "Achaeans" (Gindin, Tsimbursky). To be sure, this is only one of the existing linguistic theories

and it is not supported by many specialists. Thus, it has already been noted that Homer never speaks of the country of Achaia but refers only to the people whom he names Achaeans (Jansen, 1995, p. 1129).

Though this theory looks very attractive some prominent specialists (and first of all, M. Sakellariou) point out the linguistic discrepancy between the name of this country ("Ahijava") and the name of the people ("Achaeans").

Extremely significant are the notes made by ancient Greek authors of the Alexander the Great period who said that at that time besides Greece itself the Achaeans were known to live in the eastern corner of the Black Sea area.The name of a local River Achaions or Achardeons, as well as the name of the settlement Achai (Sakellariou,1970) are the additional proofs to this statement.And though our most outstanding specialist in the field of historical linguistics, M. Sakellariou, quite rightly notes that these data should be additionally studied we cann't completely ignore the remarks of ancient authors.

According to these linguistic theories, the homeland of proto-Greeks is either placed in north Black Sea area or in the southeastern corner of the Black Sea. The latter location seems to be more acceptable since it is supported by rich archaeological material. Indeed, the above-mentioned finds testify to the fact that the BMAC has its prevaling (one may even say, exclusive) parallels in the Syro-Anatolian region and absolutely none with the material of the north Black Sea area. It seems very posssible (though, not proved yet) that the BMAC tribes were those proto-Indo-Aryans who lived next to the Achaeans on their proto-homeland. If this assumption is true then the Achaia land was most certainly located in the south-eastern corner of the Black Sea.

Practically, at one and the same time the Achaean tribes settled in the Aegean world, while the Indo-Iranian ones went farther in the general eastern direction up to Bactria and Margiana (and farther up to the expanded zone of the BMAC). Both waves of tribal migration brought to their new homelands their old traditions, customs and especially religious ideas and ritual ceremonies that once were common to all of them. These traditions found their reflection not only in the temples that were built in Bactria and Margiana, but in the seals and amulets that, in spite of their local production, were decorated by the compositions that were traditional in the common proto-homeland.

In this regard, one should draw special attention to parallels between the Mitannian and Bactrian and Margianian glyptics that have been repeatedly mentioned above. The well-known treatise on horse breeding (the Kikkuli) has the Indo-Aryan terminology and it is documented that the ruling elite of Mitannian society had the names of the Indo-Aryan deities. And even in case that by that time the Indo-Iranian was a dead language used by the Mitannian elite and foreign to the main Hurrite population, we have sound proof that the Mitannian rulers had an Indo-Iranian, Aryan origin. It is accepted that the Indo-Iranian tribes migrated to north Mesopotamia from the territory situated to the northeast of Mitannia soon after 1550 B.C., i.e. from the regions of Lake Urmi, which is very significant, this once again points at the existence of more than one wave of migration.

In this case, the typical Mitannian subjects and images in the Bactrian and Margiana glyptics that reflect the ideological traditions of their bearers give us every right to believe their putative Indo-Iranian origin. The seals and amulets, though produced locally in the new homeland, still bore the traditional compositions and images that were so popular in the old north Mesopotamian homeland of the immigrants. To the parallels mentioned above one should add such a common architectural detail as "blind windows" which is traced in the undisputably Mitannian temple in Tell Brak, in the temples of Dashli-3 in Bactria and the temple and palace of north Gonur in Margiana. The presence of "blind windows" may indicate a special (not domestic) purpose of these chambers. In other words one can believe that the religious ideas and mythological representations as well as the cult rituals of the Mitannian population and the tribes that colonized Bactria and Margiana have a lot in common.

At the same time, we have no grounds to see any direct and immediate link between them. This assumption contradicts the chronological range of the Mitannian state and the emergence of new tribes in Bactria and Margiana in the beginning of the second millennium B.C. However, the construction of "blind windows" in Tepe Gawra testifies to the deeply rooted local north Mesopotamian traditions that had existed there before their emergence in the zone of the tribal settlement in the BMAC.

It is logical to assume the existence in north Mesopotamia (and broader, in the Syro-Anatolian center) of an archaeological complex that in many respects may have been similar to the ancient culture of Syria and Anatolia on the one hand and Bactria and Margiana on the other. From the linguistic point of view these might be the Indo-Iranian tribes that lived close to the Achaean ones and had a general linguistic community that they brought along to their new homeland after being split up.

However, it is easy to recognize that the similarity between Syria and Elam finds no such evidence in the intermediate territory of Mesopotamia itself. This can be explained in part by certain historical events and in particular by the Hittite expansion when at the peak of its might the Hittite army reached south Mesopotamia which bordered neighbouring Elam. Perhaps, it was not accidental that about 1850 B.C., Elam experienced a sharp decline that so far cannot be explained. Possibly, there existed other communication routes that by-passed the old way along the Zagros mountains. To support this assumption one can refer to the Harappan trading post in Shortugai that was also located very far from the metropolis and had no related sites in the intermediate territory from the Indus Valley and up to the upper part of the Amu Darya (Frankfort, 1989).

The same situation is true for Elam and the BMAC where in the intermediate territory sites with a similar culture are also unknown. Partly this can be explained by the fact that these two areas are separated by the waterless deserts of Dashti Kevir and Dashti Lut, both being absolutely unsuitable for farming. However, there could be a second way from north Mesopotamia along the south foothills of the Elbrus up to the south coast of the Caspian Sea with the well-known Marlik cemetery. The richest tombs contain a lot of arms, models of military chariots, horse burials, and objects of prestige imported from Syria. Keeping in mind the Aryan element in the Mitannian society (Parpola), of special interest are the seals of the Mitannian type and their local copies. It has been suggested that the Marlik cemetery belonged to the Indo-Iranian military aristocracy (Kurochkin, 1993, p. 25–35). The location of the cemetery leads one to assume that it had marked an intermediate point on the way of migration of the Indo-Iranian tribes in the general direction from west to east (Fig. 75).

One should especially note the fact that in the vast territory of northeastern Iran (Kuchan), in Turkmenistan, in Bactria, Seistan (Nadi Ali, Mundigak) and Baluchistan there emerged tribes with painted ceramics of the early Iron Age. This archaeological culture is characterized by such paleoethnographical features as handmade pottery, construction of monumental buildings of the temple type or palaces on high artificial platforms. Also, one should mention the absence of ordinary burials which in an indirect way could suggest the tradition of either cremation or excoriation.

The problem of culture of the painted pottery of the Early Iron Age is of great interest because some linguists have set forth a theory that the creators of the culture had been the Indo-Iranian tribes which had settled in Central Asia and the Indian Subcontinent (Bongard-Levin, Grantovsky, 1983, p. 185-188). This hypothesis makes us dwell on archaeological arguments for such a supposition.

For the first time corresponding materials were found in the beginning of the XXth century in southern Turkmenistan (Anau), then in Margiana (Yaz depe) and in Bactria (Tilla Tepe). This very archaeological complex was also found in the valley of the Atrek River, near Kuchan in northeastern Iran, as well as in southern Afghanistan (Mundigak, Nadi Ali).

Distinguishing paleoethnological features of the complex are its handmade (not wheel-made!) pottery, often decorated with painted patterns, and palaces (Yaz depe) and temples (Tilla tepe) built on high brick platforms which can be also found at Nadi Ali, Mundigak, Elken and Kuchuk tepe. Side by side with the painted pottery grey-burnished handmade ware and wheel-made ceramics characteristic of the BMAC sites (Sarianidi, 1989) were also rather widespread.

Though the painted pottery is the characteristic feature of the archaeological complex, its geometric designs are rather simple, inexpressive, and can not always serve as distinguishing mark. Grey and black-burnished handmade ware with vertical, often corrugated (sometimes oval in section, set vertically at the very rim of the vessel) handles and sharpened rings or sharpened relief bolsters on the upper part of vessel makes a specific and rather revealing ceramic complex (Sarianidi, 1989, p. 32, pl. XLIX-LIV). Oblique (or horse-shoe-like) relief decorations applied to the upper part of the handmade vessels are also very

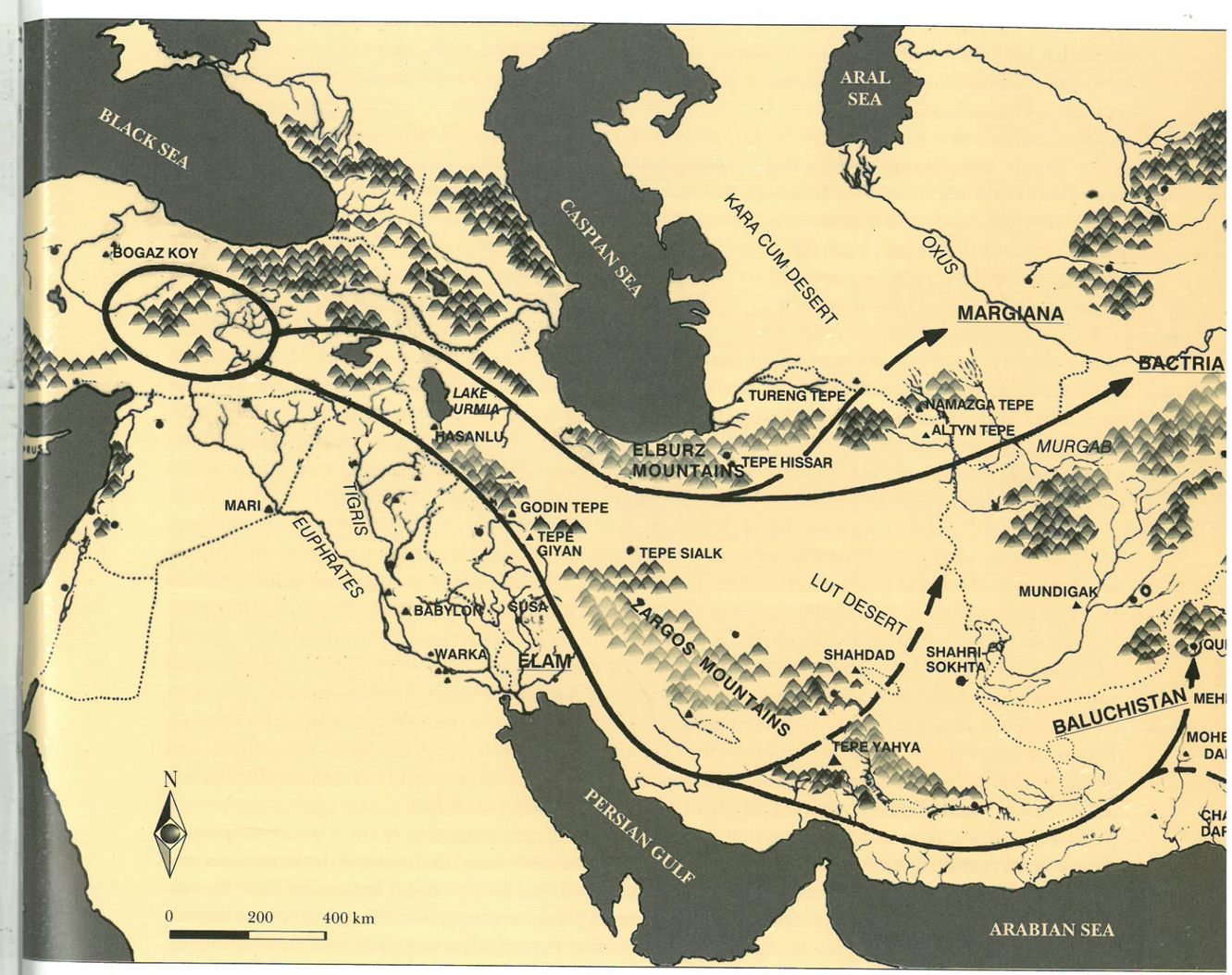


Fig. 75. Map of the Indo-Iranian settlings.

significant (Sarianidi, 1972, p. 20). Such vessels were found in the layer Tilla-II, they had close parallels in the material of the layer Yaz-I in Margiana (Masson, 1959, pl. XXVI). On the Indian Subcontinent such grey-burnished pottery was attested at Pirak-III (Jarrige et al., 1979, fig. 69, 75, 78, 80, 84) where it coexisted together with the painted ware, painted lids or "lugs" (Jarrige et al., 1979, pl. XXVI, B) and kitchen vessels with bolsters applied to them (Jarrige et al., 1979, pl. XXIX, C) from Pirak are similar to the material from Tilla Tepe. But the most revealing are such individual items as trapeziform pierced "bricks" from Tilla Tepe (Sarianidi, 1989, pl. LVII) and Pirak (Jarrige et al., 1979, fig. 103), and especially —pierced copper pipes from Tilla Tepe (Sarianidi, 1989, pl. III) and Pirak (Jarrige et al., 1979, fig. 107): one cannot explain the appearance of such items at the sites by mere chance.On the other side, these pierced copper pipes being extremely representative , are found far on the west in Chagar Bazar (Mallowan, 1937, pl. XIV,C), in Alallakh (Wooley, 1955, pl. LXXIII), in Deve Huyuk in north Syria and Giyan and so their distribution from Syria (through Iran) in the general eastern direction (Bactria, Baluchistan) seems most possible.

Like at Tilla Tepe, at Pirak alongside the painted pottery the black-burnished ware appears, it was already attested at Mundigak and in culture of Jhangar in the Indus Valley. The appearance of the ceramics can be explained by diffusion of some tribes (Jarrige et al., 1979, p. 363), the same explanation can be applied to the corresponding materials from Bactria (Tilla Tepe) and Margiana (Yaz Tepe). J.-F. Jarrige has justly noted that the Pirak complex of the Early Iron Age had more ties with Bactria and Margiana than with Iran (Jarrige et al., 1979, p. 410), though it seems that all the complexes had a common origin in western Iran, probably somewhere in the region of Lake Urmia. Actually, this distinctive group of vessels has no local Central Asian source of origin, but one can point to obvious parallels in ceramics of the layer "A" at Geoy Tepe near the Lake Urmia (Burton-Braun, 1951, fig. 35-36) where this ceramic tradition goes down to the earliest layer "K" (the beginning of the III-rd millennium B.C.) of the same site and even bears resemblance of the Anatolian ceramics of Beycesultan (Lloyd, Mellaart, 1962, fig. 37 n. 1) and Troy (Blegen, 1950, fig. 260, 261).

New archaeological evidence definitely contradicts to the old theory of "the epoch of barbarian occupation" when nomadic tribes from the Eurasian steppes allegedly invaded the territory of Turkmenistan and Bactria. The presence of "nomadic" handmade vessels with relief bolsters at the sites in the area was considered by the adherents of the theory (Vinogradova, Kuzmina, 1996) to be a proof of such an invasion. But one can raise an objection to the idea pointing to the fact that such ware is found at Pirak, where it makes about one third of pottery (Jarrige, 1979, fig. 65-67, 72, 72), though in Baluchistan we do not know the sites of ancient nomads or even the slightest traces of their presence there.

Assertion that pottery with relief braids and finger-imprints had its origin somewhere out of western Asia (Kuzmina, 1994, p. 135) can be refuted by corresponding ceramic materials from western Iran, especially —from Luristan (Goff, 1971, p. 145, fig. 6, n. 25-27, 44, 46); there such pottery is known since the IV-th millennium B.C. and obviously has local origin. Probably it is not a mere chance that large settlements in Luristan, Giyan, Jemshedi, Baba Jan and some others, were desolated in the XIIIth century B.C. (Goff, 1971, p. 151), and almost simultaneously there appeared an absolutely new archaeological culture of painted pottery of the Early Iron Age in Central Asia and on Indian Subcontinent.

In general, painted ornamental designs of Central Asian ceramics of the Early Iron Age have some affinity with the patterns of pottery from southwestern Iran (Sarianidi, 1989, fig. 7–9). This affinity and similar vessels with bolsters and grey-burnished pottery indicate southwestern Iran and Luristan as one of the centers where the tribes of the Early Iron Age appeared in Central Asia.

We have strong reasons to suppose that previous to this alleged migration of the culture employing painted pottery it had close contacts with the tribes which appeared here on the eve of the third to second millennium B.C., as the BMAC tribes did. Circumstantial evidence for that could be derived from the vessels with "bridge spouted" and painted designs originating from cemetery of Sialk B, the vessels show a combination of two ceramic styles dating at least to the end of the second millennium B.C. In other words, one may suppose that long before the appearance of the immigrants in Central Asia they contacted each other somewhere in western Iran and adjacent regions. Besides, points of similarity between these tribes can be traced in similar architectural principles of lay-out of Tilla Tepe and Baba Jan, as well as in the presence of "blind windows" in constructions at the sites of western Iran (Baba Jan, Hasanlu) on the one hand, and at the sites of Bactria and Margiana on the other.

In this respect, sites of Fergana which mark the extreme eastern limit of diffusion of the culture of painted pottery of the Early Iron Age (Chust culture), are of great interest. We have sound reasons to suppose that these Fergana tribes did create a peripheral variant of culture of Yaz-I and Tilla Tepe when mainly Bactrian population of more western regions moved (apparently looking for new lands) in northeastern direction and settled in the fertile oasis of Fergana. As an argument for such an idea we can point not only to Fergana painted pottery, but also to the characteristic segment-like pierced "bricks" already known on Tilla Tepe, Yaz and Pirak (Fig.76). Moreover, like in Bactria and Margiana, here we can attest side by side with the sites of the culture of painted pottery (Chust, Dalversin) some chance, but typically BMAC objects. In this respect the Khakh hoard including several bronze wares is the most revealing. Among its items was a pin with a head representing a woman milking a cow, a similar pinhead was found at Hissar III, and now another one — in Bactria (Kohl, 1984, p. 188, pl. 24).

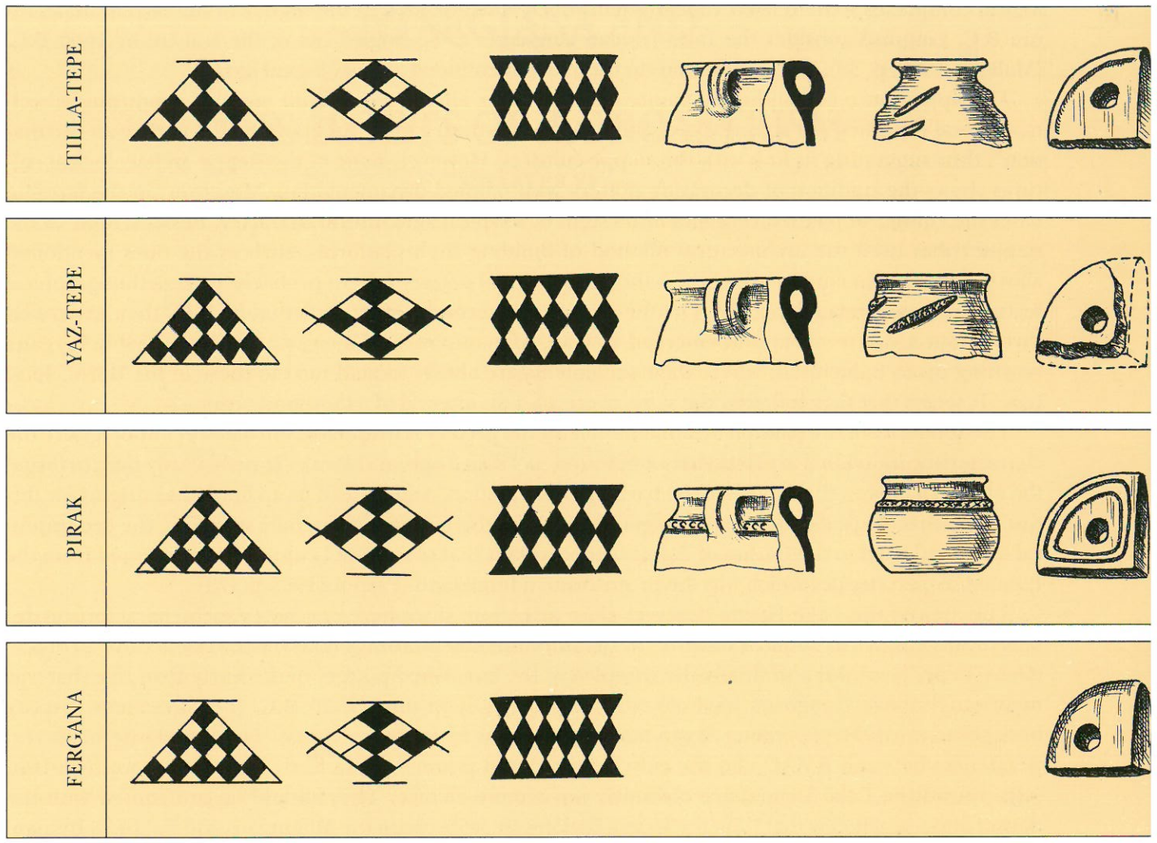


Fig. 76. Comparative table of the painted pottery culture of Early Iron Age.

One can also mention the "stone weight" found in the valley of the Sokh River in Fergana. The "weight" was decorated with the image of a heraldic eagle flanked by two serpents confronting each other (Sarianidi, 1986, fig. 43). Such "weights" were found in Bactria (Glories of the Past, 1990, fig. 27, 28), but originally the items of this type had appeared in Mesopotamia and the land round the Persian Gulf. Ph. Kohl has noted that these finds do not prove the existence of settled farmers of Bactrian and Margiana type in Fergana, but that the finds indisputably indicate the limits of BMAC influence and ties give reasons to expect that such settlements will be found here in future (Kohl, 1984, p. 189).

An assumption that there were two waves of migration —in the beginning and at the end of the second millennium B.C.— corresponds to archaeological observation of desolation of many of the traditional agricultural centers in Asia Minor, Iran and Turkmenistan about 1900 BC, whilst the BMAC almost simultaneously appeared on the territory of "Outer Iran" and —allegedly— of northern China. The decline.of many of ancient farmer's settlements in western Iran in the XIV-XIII centuries B.C. can be connected with the appearance of the culture of painted pottery in Bactria, Margiana, Baluchistan and perhaps in Fergana, as it was noted above, and one has good reasons to suppose that the immigrants previously to their appearance in Central Asia lived in adjacent territories and had close contacts at their homeland. Probably, this circumstance could determine their migration in one direction though with a large chronological interval. Traces of their sojourn in Central Asia were marked by the BMAC sites and later by the sites of the culture of painted pottery of the Early Iron Age. On the Indian Subcontinent there are the post-Harappan culture of Jhukar and later, apparently the culture of Malva type, but the latter statement needs further corroboration. Thus, one has reasons to see behind these two archaeo-

logical complexes some related Indo-Iranian tribes which divided in the middle of the second millennium B.C. Linguists consider the Indo-Iranian languages to be singled out of the Iranian by 1600 B.C. (Mallory, 1989, p. 38), that corresponds to the above-mentioned archaeological facts.

The appearance of handmade painted pottery after almost a thousand years of producing wheel-made local ceramics was so unexpected that this period was called "an epoch of the barbarian occupation", thus suggesting its link with the steppe cultures. However, none of the steppe archaeological cultures shows the tradition of decorating pottery with painted ornamentation. Moreover, in the farming oases the culture of painted ceramics bears signs of a typical agricultural character. Besides, none of the steppe tribes used the architectural method of building high platforms, such as the ones mentioned above. The sudden emergence of the handmade painted pottery is most probably a paleoethnographical feature of some related people. On the eve of the second-to-first millennium B.C. they expanded throughout a vast territory and emerged in Iran, Afghanistan,Turkmenistan and presumably Fergana reaching up to Baluchistan where their settlements are always located next to those of the BMAC local type. It seems that they followed the same route after an interval of a thousand years.

The similarity of the painted ornamentation on the pottery is disputable but still we cannot ignore the characteristic individual artifacts that were found in Tillya Tepe and Pirak . It is obviously time to forget the old theory about the "epoch of the barbarian occupation" and instead try to find other origins for this distinct archaeological culture. One linguist says about this culture: "Generally speaking, the geographical mileu reflected in the Gathas of Zarathustra overlaps that of the Yaz I culture" that emerged from the Pontic-Caspian steppes which was the proto-Iranian homeland (Parpola,1995,p.372).

The area of the Lake Urmia deserves close attention, since here one notes such characteristic details of this culture as "blind windows" in the monumental buildings (Hasanlu), vessels with "bridges" (Geoy Tepe, Hasanlu) and finally the complex of the burnished pottery of the Early Iron Age that was mentioned above. Linguists have already noted that soon after 1550 B.C. the Mitannian dynasty brought to north Mesopotamia Aryan names and terms from the northeast. These undoubtful correspondences between BMAC and the culture of painted pottery of the Early Iron Age in western Iran (esp. round the Lake Urmia) are obviously not a mere chance. They should be confronted with the data of linguists who say that "...in the Urmia region contact between the Mitannians and the Indo-Iranians could and had to take place in the first half or in the second quarter of the second millennium B.C." (Diakonov, 1970, p. 61).

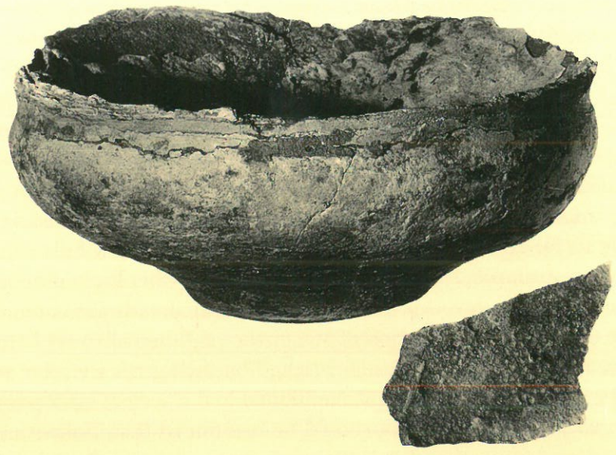
Taking into consideration the fact that it was the area of Urmia where there were traced some elements of similarity both with the BMAC ("blind windows", vessels with "bridges") and the painted pottery culture of the Early Iron Age (the burnished complex of Tillya Tepe), one can assume that the migration of the tribes of this culture along the old route (though, after an interval of a thousand years) was not accidental. It is probably explained by its community that dates as far back as the third millennium B.C.

Quite possibly, on the eve of the third-to-second millennium B.C. the first migration and on the eve of the second-to-first millennium B.C. the second migration waves started from this putative homeland and moved along essentially the same route in a general eastern direction. Though the material culture of these two waves differs greatly, still one can see some parallels. For example, none of them depicted their deities, and temples of Tillya Tepe, as well as those of Margiana are dedicated to the fire cult. Their precise linguistic classification (perhaps, Indo-Iranian with different dialects) has yet to be studied thoroughly. At present, the available archaeological data more closely correspond to the linguistic theory (Gamkrelidze, Ivanov, 1984) that marks two routes of movement: the "northern" one through north Iran to Turkmenistan, Bactria and Margiana and the "southern" route through Central Iran (Sialk) and Sistan (Nadi Ali) farther to the east up to the Indus Valley. The southern variant most likely suggests the way to the Indian Subcontinent through Elam and south Iran.

Naturally, future excavations will help to define more accurately and definitely our present assumptions. But even at this stage we should resolutely deny the theory of the steppe origin of the painted ceramics culture of the Early Iron Age. Its roots go back to west Iran, the sites of the Lake Urmia region being one piece of evidence, but far from the only evidence, on which to base this conclusion.

MARGIANA AND THE ROOTS OF ZOROASTRISM

CHARTER VI



As was demonstrated in the preceding chapter, in the second millennium B.C. the main population of Central Asia was Indo-European while Margiana and Bactria were inhabited by the Indo-Iranians. These archaeological data are supported by the new linguistic theory according to which Zoroastrism emerged from an Indo-Iranian, Aryan basis with a homeland in the east Iranian world rather than in west Iran. This eastern world besides east Iran includes such historical areas as Choresmia, Sogdiana, Bactria, Margiana, Drangiana and Arakhochia. Over half a century ago, V. Struve reached the conclusion that "...Margiana was the first area where the believes of Zoroaster were accepted by the people" (Struve, 1949, p. 15). Another Russian linguist, V. Abaev, says definitely that: "The homeland of Zoroastrism has to be looked for in these areas and nowhere else" (Abaev, 1956, p. 37).

Contrary to the old theory that said that Indo-Iranians were mainly cattle-breeders and even nomads, today linguists have come to the conclusion that "Zoroastrism was formed in a territory with an urban civilization and in a society with a social hierarchy... ...This community was based on the type of economy that combined farming and cattle-breeding, the features of the oasis and steppe cultures" (Gnoli, 1989, p. 177). We believe that Zoroaster lived in approximately such a historical environment and in the period not later than the seventh century B.C. In such case we should ignore Sogdiana and Choresmia as putative places of the origin of his doctrine, since in the first half of the first millennium B.C. by no means could they be regarded as areas with an urban civilization, which presupposes certain economic and social consequences. Among Central Asian areas only Bactria and Margiana and presumably Arahozia and Drangiana can claim to be the homeland of Zoroaster. Indeed, in the Late Bronze Age in the field of socio-economic development, Bactria and Margiana left Sogdiana and Choresmia far behind and the elements of proto-urban culture appeared in these latter areas only after they had been included in the Achaemenid Empire. Nevertheless, it is true that Sarasm in Tadjikistan is an exception, but it is located on the periphery of Sogdiana and besides, its early history was linked with the ancient farming world of Central Asia (Turkmenistan, Baluchistan) in the fourth millennium B.C., at least.

In this connection, one may doubt the recent theory of the linguist I. Piankov who says that the archaeological data confirm the Sogdiana origin of Zoroastrism (Piankov, 1996, p. 19, 22). The Zoroastrian doctrine was not something absolutely new and original, it was based on the old ritual and religious ideas of his native ancient Iranian community. This was an extraordinary complex philosophy characteristic of highly developed urban societies. Sogdiana and Choresmia lack practically all these conditions which are, on the contrary, found in Bactria and Margiana.

Among the linguistic theories of the last decades the one with the most common agreement is the theory put forth by V. Henning according to which Zoroastrism emerged in Merv (or in Gerat, which is less likely). As a result, Margiana and Bactria seem to be the most probable centers of the origin of Zoroastrism. Since Zoroastrism emerged from Iranian paganism, we have reason to study the archaeological materials of Bactria and Margiana in the light of the texts of Avesta and Rigveda. But first of all, one should not expect to find direct parallelism between the archaeological data and the texts of these sacred books. The fact is, that the Prophet had to strictly reform the old ritual and religious ideas of Iranian paganism and in order to fit them into his theory he had to create his own innovations.

In the Avesta one finds numerous references to the fact that the settled Zoroastrians had constant contacts with the nomadic Scythians who are mentioned under the name of Saka in the ancient Persian inscriptions. In the opinion of V. Struve, these nomadic Scythians/Saka from ancient times had made attempts to settle on the fertile lands of Margiana. This assumption is now fully supported by such direct archaeological facts as for example, the sites of the Andronovo tribes located next to settlements within the limits of Margiana. It is quite correct to remember here that already the famous geographer Ptolemu called attention to the fact that the population of Margiana was ethnically very heterogeneous (VI, 10).

Extremely important for us is the conclusion reached by such great scientists as V. Grigoriev and V. Struve who say that the name "Amurgian Saka" mentioned in the ancient inscriptions was produced from the name of the Murgab River. Moreover, it should be mentioned that "Saka-Amurgians" have another name of "Saka-Haomovarga" or in other words "Saka who prepare haoma". "Saka-Amurgians" and "Saka-Haomovarga" were known to Herodotus and according to Helanik they lived in the environs of Margiana.

All these linguistic theories concern the period of about the middle of the first millennium B.C. in Margiana and seem to have nothing to do with thousand-year- old events. This idea could be true but for one fact. The fact is that the only thing that the ancient Persian scribes knew about the distant and mythical Saka was that they had prepared haoma. This fact was very significant for the Persepolian scribes, the majority of whom was familiar only with the cult of the God of Ahura Mazda.

It is extremely important to add that in the temples of Margiana such as Togolok-1, Togolok-21 and especially in the temenos of Gonur, typical Andronovo vessels (or their fragments) were found in the rooms associated with the preparation of the soma-haoma type beverages. This archaeological fact strongly supports the linguistic theories and the presence of these articles in all three temples confirms the conclusion that the predecessors of Scythians-Sakas, that is of the Andronovo tribes, were familiar with this ritual drink as early as the second millennium B.C.

On the other hand, Herodotus witnesses that Scythians used to make fire in their tents and threw hemp on the scorching stones and then "the Scythians screamed loudly in the pleasure of inhaling it" (Herodotus, IX, 74). The same custom was practiced by the Altai Scythians (the Pasyryk tombs). This means that Scythians used narcotics that were traditional for those Andronovo tribes that had close contacts with the Margiana tribes which apparently could have borrowed this custom from them.

Long ago, the linguists noted that the Scythian element played an important role in Zoroastrism and that it had emerged in direct contact with the Scythian environment (Abaev, 1956, p. 39). Among all the known ancient farming oases Margiana seems to fit this theory best.

However, one should not forget that in the second millennium B.C., in Margiana the relations between the settled and steppe cultures were characterized by peaceful and neighbourly manners, but the situation could have changed in the Scythian period, that is in the middle of the first millennium B.C. That was the time of hostility which can be explained in different ways. From the point of view of archaeology this change was mainly caused by the fact that due to the natural change of the ancient delta of the Murgab River, people in Margiana also moved far to the southwest. The complete absence of any Scythian traces on the new Margiana lands can be explained by the fact that they did not follow the tribes of farmers but stayed behind on their old lands. The territorial separation could have gradually led to the end of the former neighbourly contacts and finally to hostilities. As a result, the Scythians arranged raids on the farming oases aiming to steal their cattle. This situation could have found its reflection in the Avesta. But one should bear in mind that most likely this was the fight between two branches of Iranian tribes: nomad Scythians and settled tribes, according to the assumption of V. Abaev.

Here we would like to make a short digression on the archaeological discoveries in Margiana and partly in Bactria. The first publication of the discovery of Togolok-21 in the magazine Vestnik Drevneyi Istorii, 1989, Nos 1-2 caused a discussion on the definition of this temple as a proto-Zoroastrian one. The term "proto-Zoroastrian temple" is interpreted as a temple from the period prior to the birth of Zoroaster and the emergence of the Zorostrian religion but at the same time it was a temple where cults were practiced, the most important of which were included by the Prophet into the Zoroastrian religion in a new form.

The main discussions have touched on two problems: whether temples existed in the Zoroastrian religion and whether soma-haoma was used as a ritual beverage. Based on the fact that neither the Avesta nor Rigveda mention any temples, the linguists reached the conclusion that temples did not exist until the Late Achaemenid Age and as a consequence, the Togolok-21 temple has no direct connection with Zoroastrism. Since the time of this discussion, three more temples have been excavated and we now have every reason to suggest the existence of temples of fire as well as ritual libations of soma-haoma beverages in Iranian paganism. And thus, we can simply assume that Zoroaster had ignored the temples and included in his religion only the rites that were practised there simplifying them as much as possible. Indeed, the temple itself can be regarded as merely a sign of belonging to a definite religion and the principles of that religion are embodied in the rites that are practised in it, the principles are not closely related to the structure of the building. In other words, the religious rites and ideas set forth in these temples could function as the basis for the ritual connection between Iranian paganism and the Zoroastrian religion. It should be noted that nowadays some specialists and experts consider it possible to suppose that "Zoroastrian priests con-

ducted services in the temple" (Sokolov, 1997, p. 20) which finds its archaeological conformation in the example of the temple of Tepe Nush-i-Jan, which "makes reconsider the adopted opinion that the Midious did not build temples" (Dandamaev, Lukonin, 1980, p. 330). Moreover, it becomes obvious that the latest Iranian temples of fire find their planning roots in the more ancient temples of the Margiana type (especially, of the temple Togolok-21) whose altar grounds represent genuine "atashgakhs" or "the repositories of eternal fire" (Sarianidi, 1996, fig. 2).

As it has already been mentioned, according to the Zoroastrian religion, the places of sacrifice should be extremely simple. They lack the usual high altars or fixed supports for the fire. Usually, this is a small, level, open place where the fire in the altar burns at the level of a seated person's eyes. Next to it is a rectangular space bordered by furrows, a "p a v i", or clean place. This is a ritual place for the divinities who are seated there invisible, waiting for sacrifices (Boyce, 1989, p. 166). This picture has close analogies with the open "chambers" of the Margiana temples and especially the western altar grounds of the Togolok-21 temple. There, opposite each other, are two open "chambers" with low walls that could be used as places where the invisible deities were seated, according to the Zoroastrian idea. Between the two "chambers" were altars where fire burned in honour of these deities.

In this connection it should be especially mentioned that the so-called "altars of fire" in the temples of Togolok-21 as well as of the Gonur temenos, looked more like simple open places for sacrifices with the fire burning, rather than some customary altars with their up-stretched lines. And in both temples the ceremonies associated with the cult of fire were performed with extreme simplicity that fully corresponded to the future Zoroastrian rites: they took place in the open, lacked any specially designed altars and statues of deities.

Moreover, the cult of fire in the Margiana temples had practically played a secondary role and had been performed on the squares outside the temples, rather then inside of them. In the first and the main place the Togolok-21 as well as the Gonur temenos were associated with the cult of the hallucinogenic beverages of the soma-haoma type.

Thus, one can strongly believe that the ceremonies of the Zoroastrian cult of fire in the long run find their roots in the similar rites that were once spread among the Iranian pagonists and in particularly among the people of Margiana.

On the eastern altar grounds of the same temple there was found an altar with low walls and on the surface of the crater a large spot of dried fat was discovered. This immediately brings to mind the rituals of contemporary Zoroastrians who give preference to animal fat among all other types of sacrifices. This is explained by the fact that this fat when dropped into fire makes it burn more brightly. Additionally, this supposition is substantiated by the crater-shaped hemisphere of the altar, since one can easily imagine how the fat poured on the surface of such crater would slowly run down to meet the fire that was burning deep in the center of the altar. For the first time we have archaeological evidence of the altar construction that fully agrees with the Zoroastrian traditions.

As has already been mentioned, a small bone tube with an engraved image of a face was also found near the altar. The remains of poppy pollen taken from it probably testify to the fact that along with sacrifices of fat to fire, the ritual of cultic, stimulating beverages of the soma-haoma type was also performed there. In this connection the Zoroastrian rituals of soma-haoma libations associated with the sacrifices to fire are very representative (Boyce, 1989, p. 160). It seems that these altars were used for sacrifices not to glorify the divinity (as was the case on the western altar grounds) but to glorify the element of fire itself. It is noteworthy, that in India the Zoroastrians perform libations of soma in honour of fire, which could have been the case in the fire altar of Togolok-21.

In full accordance with Zoroastrian rituals, the altars and altar grounds in the Margiana temples were always located in secret places and often behind solid walls or at the end of a row of rooms, in other words, they were hidden from the eyes of the uninitiated.

In the temples of Togolok-1 and Togolok-21 there were two squares ("platforms") inlaid with ceramic fragments or slag. At later stages of the operation of the temples, drainages were made on the floor in the center of the temples. Originally, they were probably located in some other place, most likely outside the temples. According to the Zoroastrian doctrine, bloodshed and the taking of animal life were considered

very great crimes, but being forced to make blood sacrifices, they tried to install as strict and severe measures as they could for this ceremony. The earth was thought of as "pure nature" by the Zoroastrians and in order to maximally protect it from blood profanation they built platforms covered with ceramic fragments and supplied with drains. Such platforms were discovered in two temples and imply certain religious customs of ancient Margiana people that later found their inclusion in the Zoroastrian doctrine.

Above we have repeatedly mentioned the complex vaulted two-section hearths that were often located in the sacred rooms (for example, rooms 70 and 100 of the fire temple at north Gonur) of the Margiana temples. A domestic purpose for the hearths is doubtful and it seems more likely that they were used for cooking the sacrifice meat since their construction provides direct contact between the fire and the meat. It is a well-known fact that Indo-Iranians sacrificed small pieces of meat to fire and it is directly noted in "Bundahish" that the first blood of the sacrifice is allotted to the fire. This ritual adopted by the Zoroastrians "undoubtedly goes back far into pagan times" (Boyce, 1989, p. 153). The construction of such double-chambered hearths corresponds directly to this sacrificial ceremony and it seems natural that almost all these hearths are located in the fire temple at north Gonur.

The "pre-Zoroastrian" tribes practiced various native cults and rituals, most of which Zoroaster ignored and remained true only to the cults of fire and water. Linguists absolutely justifiably note that as an Iranian, Zoroaster could not have avoided the worship of fire and water. Naturally, traces of water are much worse preserved than traces of fire. And still, perhaps, it was not accidental that in the late stage of operation of the Togolok-21 temple there was built a small well between two rows of cells and also another well was found at south Gonur. We have no direct archaeological evidence that these wells were used for worship, but we are familiar with the Zoroastrian rituals of haoma libation in honour of water, including wells (Boyce, 1989, p. 156). The modern Zoroastrians reserve deep respect for water and in the orthodox communities they make regular sacrifices to domestic wells.

Other rites of Iranian pagans deserve special attention. Funeral rites in Bactria and Margiana are revealed in some rare but indisputable evidence of the so called fractional burials – graves that contain only bones which have first been separated from the flesh. To a certain extent this brings to mind the Zoroastrian rite of placing the corpse on a "d a k h m a". The current excavations of the Gonur necropolis seem to provide us with additional useful information. But at present, we should note the special rite of "cleaning" the graves wherein the whole grave chamber (from the floor and up to the ceiling) was burnt by fire thus preserving the "pure nature" of earth from its profanation by corpses. Here it is noteworthy to remember that when the modern Iranian authorities forbade the Zoroastrians to expose their dead for excoriation, the Zoroastrians started the practice of plastering the inside of the grave with cement. Undoubtedly, this is another proof of the same idea of protecting the earth from profanation.

Early Zoroastrism is known to be alien to idolatry and had no images of deities. In this connection it may be not at all accidental that in Margiana temples there was found neither a real statuette of a divinity nor a possible place for its exposure (such as a recessed niche or a podium). One cannot but remember the witnesses of the ancient Greek authors who said that Persians had no statues of gods and built no high altars.

In the above-mentioned discussion the second problem concerns the use of soma-haoma. The linguists long ago noticed that in the ancient parts of the Avesta it is said that in the beginning the Prophet rejected this narcotic beverage but then it was included in his religious doctrine as one of its main cults. Some authors qualify this fact as "restoration of the 'pre-Zoroastrian' ritual" (Livshitz and Steblin-Kamenski, 1989, p. 175). Indeed, judging by the Margiana temples, this ritual beverage played almost the primary role in the religious ideas of Iranian paganism and if the Prophet had denied its role, he would have risked losing his followers. It seems that this was the compelling reason that made Zoroaster change his first decision and include this beverage as one of the main ritual ceremonies of his doctrine.

For the first time in the world, excavations of the temples of Margiana uncovered organic remains of ephedra and cannabis as well as poppy pollen, the ingredients necessary for the preparation of the hallucinogenic beverage. Incidentally, linguists repeatedly noted that poppy is not listed among the stimulators in the Avesta and that this plant is poor in alkaloids. But probably in the Avesta they had mentioned only the strongly effective plants and for this reason had neglected mentioning the poppy. Another pos-

sible explanation is that the high demand for intoxicants made the people use any kind of hallucinogenic plants including poppy in making the ritual drink. In any case, in the whole of "Outer Iran" among all the known and well-studied archaeological sites, only Margiana displays documented evidence of the wide use of this popular ritual beverage. All the same, one should not dismiss the existence of such centers as Drangiana where in Godari Shah there were discovered the above-mentioned "miniature columns" which can be looked upon as indirect evidence of the existence of another similar place where intoxicants were used.

We do not have direct evidence that haoma was probably viewed anthropomorphically since Zoroaster addresses it as if it were a human being. Already mentioned are cult vessels with sculptured friezes that sometimes represent people in wrestler's poses (there are two people depicted in the process of wrestling). This to a certain degree confirms that haoma played the role of a fighting hero in the mythology, that is, due to its ability to awaken battle fury, it became a fighting hero personified. And perhaps it is not accidental that on the friezes this fighting hero is always accompanied by animals to whom he is compassionate, as a divinity with a special charge of animals.

A point which remains debatable is the idea that the worship of fire and haoma was a common Indo-Iranian heritage and "...one could drink haoma and worship fire and simultaneously remain alien to Zoroastrism" (Dandamayev, 1989, p. 170). But one can also say that it would be impossible to be a Zoroastrian without worshipping these two cults which are so clearly expressed in the Margiana temples.

It is an accepted fact that the philosophical ethics of Zoroastrism is based on the idea of dualism, on the struggle of Good and Evil. This general idea is very clearly represented by the complex compositions on the articles from the BMAC. The most convincing among them are seals and amulets on which snakes (positive elements) fight dragon-snakes (negative elements) in their attempt to steal the "semen of life" that universally personifies life itself. M. Pottier has suggested comparing the idea of stealing the "semen of life" with the Vedic ritual of offering milk to the God of Fire, Agni, "...since cow's milk is nothing else but the sperm of Agni... ...because Agni, thanks to this offering, reproduces his own sperm" (Potter, 1984, p. 86).

Many amulets depict dragon-snakes in an aggressive pose with wide open jaws and furious eyes who attack peaceful herbivorous animals with coiling snakes under their bellies trying to reach the hind legs of the animals. In the opposite cases, the dragon-snakes are depicted as protectors of the "semen of life" who, in an aggressive pose, creep out from under the hind legs of animals trying to save them from snakes, presumably. It is natural to think that these narrative compositions reflect the most dramatic episodes of local myths in which the struggle between Good and Evil is the main subject.

Another Bactrian amulet shows the struggle between a hero-deity and a five-headed hydra (Pittman, 1984, fig. 26, B), a scene that to a certain extent can be compared with the story in the Avesta (fifth Yasht) where the hero Frataon fights the three-headed Azi Dahaka. Among the kneeling personages of the Bactrian pantheon one can find anthropomorphic figures with raised hands that end in snake heads and the suggestion is made that they might represent the predecessor of the Zoroastrian Azi Dahaka who has the name of a "snake-man" in the Avesta (Azarpay, 1991, p. 47). Other amulets represent only the head of this monster with furious eyes and hair separated in two halves (on the head and the beard) and snakes wound round his neck.

The BMAC glyptics offer a good collection of items with images of dragon-snakes (sometimes winged, with a horn and beard) that differ from the four-legged dragons of Mesopotamia but closely resemble those from Elam. M. Pottier has suggested that these dragons depicted in the mountains probably represent the image of the dragon Vrtra from the Rigveda where "he lies on the mountains" (Pottier, 1984, fig. 30, I 225). According to the Rigveda, Vrtra is the owner of all the water sources and only after being conquered by Indra he releases the world waters and restores the general cosmic order on earth. One cannot but compare this with the subject of heroes-dragon-fighters from the BMAC who probably reflect the same general idea of the struggle with dragons for the possession of water supplies and for the cosmic order on earth.

In the most ancient part of the Avesta a dragon-snake Azi Sruvara is mentioned. He "eats people and horses" and is tremendously large in size. There were found several seals and amulets in the BMAC that

have images of dragon-snakes (a winged one in a single case) and in their mouths one can see the upper parts of humans that these monsters are trying to swallow. One amulet shows a four-legged monster of gigantic size that is swallowing a bull, this testifying to the existence of variations on the same subject.

Seals, amulets and clearly ritual four-spouted vessels are repeatedly decorated with compositions of a tree with a pair of birds in its branches. W. Ward compared absolutely identical compositions on the Syro-Hettite seals with one myth from the Avesta, the "Tree of all Seeds" that is found in the middle of the Varash sea and birds take away its seeds to the Sky and wind and rain bring them back to the Earth. It seems rather logical that this composition from Bactria and Margiana later through Iranian paganism was included in the Avesta.

The same myth says that in the roots of the Tree is a fish that protects the tree from a variety of vile creatures, primarily from frogs. In this light it may not be at all accidental that the ritual vessels with sculptured friezes along the rim that were used for libations are decorated on the inside by raised figures of frogs with coiling snakes among them in many cases. These vessels filled with haoma-soma may represent the idea of a water reservoir with snakes and frogs and in this case they may personify the myth which later in the reformed doctrine (when fish replaced snakes) could have been included in the Avesta.

Of great interest are five mirrors, possibly from a single plundered tomb of Bactria. One side of each mirror is polished and the other has large engraved curls that represent sea waves (Sarianidi, 1989, fig. 14). The engraved side is decorated with subject compositions that consist of different birds and animals, including a spread figure of a frog. One composition includes a snake in wild waves and a horned bull emerges out of the water towards the snake. The composition may somehow be connected with the Rigveda myth about "the snake of the depths".

It has been mentioned above, that in the Margiana temples there were found "deposits of sacred ashes" that indicate that the ashes from altars were divided into several categories, a situation that finds parallels in the same Zoroastrian rituals. During blood sacrifices collective meals composed an important part of this ritual (Boyce, 1989, p. 164). In this connection it is not accidental that behind the outer southeastern corners of the Togolok-21 temples and especially of the temenos of Gonur there were found hills of ashes. They contain no building debris and consist of black ashes with coal and an extremely large amount of animal bones and ceramic fragments. The "ash hills" of the Gonur temenos with its size of 100 by 50 m and a height of 3 m easily could have been formed as a result of some collective meals of a large number of people, exactly as is prescribed by the Zoroastrian doctrine (i d a).

In spite of the unique character of the temples of Bactria and Margiana, in the opinion of B. Brentjes and K. Yettmar, it is the round temple of Dashli-3 which reveals close parallels with the fortress mentioned in the Avesta and built by the first man Yima. A. Parpola has joined in this opinion saying that "this similarity is very close". In the same manner D. Tucci found it possible to compare the so-called palace of Dashli-3 with a mandala, a place for the coronation of the Indo-Iranian rulers. This assumption was then supported by B. Brentjes and K. Yettmar.

The God Mitra and Mitraism occupy a special place in the history of world religion. Mitra, as a second significant God after Ahuramazda, was known to Iranian paganism. During the eastern march of the Romans to the Iranian world the Romans had accepted Mitra. According to linguists the Mitra from the Avesta fundamentally differs from the one adopted by the Romans. On many frescoes and sculptures he is depicted as a human being who is killing a bull with a scorpion biting the bull's genital organs, and as a rule next to the bull is a coiling snake.

Bull, snake and scorpion are the main images of the "western" Mitraism that are persistently repeated in Iranian paganism. Suffice it to recall the numerous amulets and seals of Bactria and Margiana that depict animals (more rarely, birds) that have coiled snakes near their genital organs (sometimes, the snakes actually burrow into them). Besides snakes, one can see myriapods as well. Even more significant are the cult vessels with the sculptured friezes where the heads of the snakes that are crawling out onto the rim unequivocally rest against the bellies of the bulls that make up the frieze.

It has already been mentioned that such compositions on seals, amulets and ritual vessels express the idea of "stealing the life semen". F. Grener puts up a question and answers it, saying "...has Mitraism pre-

served some subjects that it had inherited from the pre-Zoroastrian religion? The new discoveries in Margiana suddenly speak in favour of this" (Grener, 1989, p. 170).

It is noteworthy, that such compositions have no local Central Asian roots but were originated in the glyptics of north Mesopotamia and especially of Anatolia of the fourth millennium B.C. (Fransipane, 1993; Abb. 4, I 16 Behm-Blanche, 1993, Abb. I and 4) where eagles, snakes and scorpions were included in their compositions (Esin, 1994, fig. 6 and 4).

The cult vessels of Bactria and Margiana were associated with the ritual libations of soma-haoma type and perhaps it is not accidental that in the Rigveda the dragon Vrtra is directly identified with soma and is killed by Indra (Boyce, 1989, p. 201).

The Middle Iranian Zoroastrian tradition has preserved a myth in which Ahriman kills a bull, and ears are formed from its marrow and the seeds of these ears give new life. To a certain degree, this can be associated with the compositions of "stealing life semen" from bulls, as found on seals and amulets of Bactria and Margiana.

It is assumed that images of people with lion heads and snakes that wrap around their bodies are associated with the ancient Mitraism, while absolutely the same lion-headed winged personages and winged lions with snakes under their bellies and scorpions that dig into their tails may possibly depict the image of Ahriman who is known in Mitraism as a death deity (Bivar, 1976, Tabl. I). In this case it seems logical that winged lions (in some cases with human heads) are popular personages of the Iranian paganism reflected in the glyptics and seals of Bactria and Margiana.

It would be very naive to expect direct analogies between the Iranian paganism and orthodox Zoroastrism. Still, the given parallels between the archaeological and linguistic evidence look very convincing and throw new light on the problem of the origin of Zoroastrism. And the new archaeological discoveries bring new proof of this. Thus, in eastern China quite recently there was discovered a stone tomb plate that depicts a funeral scene in the center of which in front of the altar of fire there stands a priest with a special bandage over his mouth, an indisputable sign of his Zoroastrian relationship (Lerner, 1995, p. 179-181). This is the first and most convincing evidence of the existence in east China at least in the Early Middle Ages of Zoroastrian communities whose age-old history is connected with the history of Bactria-Tocharistan. In this respect, it is also a very important fact that in the above-mentioned Tocharian manuscripts we come across some passages that undoubtedly reveal their knowledge of some parts of the Avesta (Grene, 1993, p. 150-152).

The archaeological facts as well as the linguistic data confirm the opinion of those scholars who say that Zoroastrism emerged in east Iran and in the neighbouring Central Asian regions. Sogdiana and Choresmia cannot be regarded as the possible origin of Zoroastrism, since their historical and cultural development was far behind such historical areas as Margiana and Bactria and quite possibly Arakhochia and Drangiana. Zoroastrism is such a complex ethical, philosophical and religious doctrine that it could have originated only in a highly developed intellectual environment. It must have originated in a community with extremely complex ethical, mythological and religious ideas which later in the reformed doctrine were included by the Prophet in his religion. The lack of such archaeological material excludes Sogdiana and Choresmia from the list of the assumed places of the origin of Zoroastrism.

Zoroaster was the product of the pagan community that was represented by that part of Iranian paganism which is best studied on the basis of the above-mentioned materials of Margiana and Bactria. The extremely high level of the intellectual and ideological development of the society is confirmed not only by the number of temples but most of all by the variety of planning principles exercised in the construction of these temples in Bactria and Margiana. This variety attests to highly developed and complex religious ideas and as a consequence ritual ceremonies and rites. The temples of Margiana and Bactria substantiate that the main cults that were practised in this area were: (1) fire worship, (2) the libation of hallucinogenic drinks of the soma-haoma type, (3) and probably, the worship of water. In other words, the same cults that later became the main elements in the Zoroastrian religion.

The monumental and complex plans of the temples speak for the existence of complex ritual and religious ideas. One can judge these ideas only on the basis of the archaeological data, first of all on the objects of applied art, since no written documents have been found yet. Very convincing are the clearly narrative compositions of seals and amulets that testify to the ethical and philosophical system of the local tribes that was based on the dualistic conception of the struggle between good and evil powers, or as one can say, between Good and Evil. The cults of fire and water as well as the dualistic conception of the struggle between Good and Evil had existed previously with different tribes and peoples, but so far all three of them at one and the same time are documented only in Iranian paganism and then in the Avesta.

One may form the impression that Bactria and Margiana could have been the possible homeland of Zoroastrism. But such an assumption merely reflects the fact that these areas are better studied from the point of view of archaeology. The Zoroastrian religion could have originated at any point within the vast territory of "Outer Iran" where the BMAC had spread. Drangiana seems to raise strong hopes since it has monuments of the Godari Shah type that leave no doubt that the BMAC and temples of the Margiana type associated with the cults of sacred beverages had also spread there (Sarianidi, 1993, c).

Since the steppe Andronovo tribes lack these fundamental elements, the zones of their inhabitance cannot be regarded as possible origins of Indo-Aryans. Only Iranian paganism (at the present moment best of all studied in Bactria and Margiana) can claim to be the putative homeland of Zoroaster and Zoroastrism. The steppe nomadic environment had only an indirect significance and only in the contact zone where it neighboured the farming oases that were peopled by practitioners of Iranian paganism.

The latest archaeological excavations have discovered in Bactria and Margiana the existence of an indipendent and original civilization of the ancient eastern type. It opens a new page in the study of ancient history not only of the Near East but also of the whole Old World. One may agree or disagree with the historical interpretation of the archaeological material but odvioulsy, it cann't be ignored or dismissed when one discusses such global problems as the Aryan or Zoroastrian ones. It is apparently a high time to revise our old opinion of Central Asia as an outskirt of the ancient eastern world and to realise that in the secont millenium B.C. this area yielded to no other advanced center of the Ancient East. It is absolutely clear that on the eve of the third-to-the second millenium B.C. the displacement of accents took place when the main historical events moved from the traditionally advanced centers to the arena of Central Asia. We have every reason to expect that the future archaeological and linguistic studies in this territory will throw light on the so far unknown historical events of the most ancient past of the mankind.

APPENDIX I

Analysis of Floral Remains in the Ceramic Vessel from the Gonur Temenos

N. R. Meyer-Melikyan, N. A. Avetov

In the "white room" of the Gonur temenos a ceramic vessel was found which had apparently served for many years to preserve an especially valuable substance which had once had a medicinal/ritual purpose. The bottom of the vase had multiple layers of gypsum, lime and clay mixed with sand. Each layer of the mixture differed in composition, causing the layers to vary in color and density and to separate easily from the other layers. The substance measures as much as 3 cm in thickness, while each layer is from 1 mm to 7 mm thick. The remains of material that was once kept in the vase were very well preserved between the layers.

To determine its purpose, the vase was dismantled into separate layers and each of the layers was carefully studied under a magnifying glass. Separating the layers revealed some very well preserved fruits, seeds, stems and other parts of plants that were all isolated and scanned by an electron microscope. In addition, a pollen analysis of each separate layer was performed by special means. The analysis of pollen and spores is based on the fact that the membrane of spores and pollen contains a highly resistant biopolymer, the sporopollenin. This is not affected by concentrated acids, alkalis or microbiological agents, and as a result, it almost never changes over long periods of geological time. Moreover, plants produce pollen and spores in large amounts; and they have quite clear morphological indicators which allow their classification into a certain family, genus or species.

Pollen disperses for long distances from the plant that produces it, and it settles practically everywhere. But it is very unlikely that the pollen grains found in the vase under study settled there accidentally, since the vase was kept in a closed room. One can ignore the small probability of an accidental occurrence and can assume that all the pollen in the vase was either produced by those plants that had been put in the vase or that it had been carried there on those plants. Analysis of the spores and pollens makes it possible to determine the composition of the parent plants as well as the geographic locations from which the preserved material was gathered. The majority of the pollen grains are assumed to have been produced by the plants which the vase had held, while small amounts of other kinds of pollen grains are assumed to have been carried to the vase from other plants which grew in the area where the preserved material had been growing.

The contents of the vase consisted of seven layers (C 1-C 7) and the following plant remains were isolated:

C 1 (surface) –a large amount of hemp fruit, separate hemp flowers, fragments of Ephedra stems, pollen grains of hemp in large quantity, pollen grains representative of Chenopodiaceae, Poaceae, Polygonaceae, Artemisia. The composition of the floral remains in this layer confirms that for a certain period of time, the vase preserved substances received from hemp fruit as well as young Ephedra stems prior to their reproduction period proved by the absence of Ephedra pollen in the layer. The sporopollen analysis shows that all the plants were probably local.

C 2 –many fruits and pollen grains of hemp, Ephedra stems, pollen grains of Chenopodiaceae, Poaceae, Polygonaceae, Artemesia and some plants from the northern areas or from the high mountains: Alnus, Pinus, Picea, and spores of Polypodiaceae. The floral remains confirm that during the time period corresponding to this layer, the vase contained substances of a mixture of hemp fruit and Ephedra stems probably with an addition of other material that was carried down from the mountains or from northern areas.

C 3 –Ephedra stems, single pollen grains of Compositae, Poaceae, Chenopodiaceae and Artemisia. Probably, at the time that this layer was formed, the vase contained substances made only of stems of local Ephedra.

C 4 –the same composition as the one in the period of time of the C 3 layer.

C 5 –a few Ephedra remains, no pollen.

C 6 –remains of Ephedra stem and a few pollen grains of poppy.

C 7 –a lot of hemp fruit in a good state of preservation; some seeds even have embryos. Pollen grains of Poaceae, Chenopodiaceae and Artemisia.

The substance that was kept in the vase at this point of time probably consisted only of hemp fruit.

Thus, the substances that were kept in the vase at different periods of time were made of various plant combinations but always included hemp, Ephedra and less often poppy, all plants that are known to be used for the extraction of narcotics.

Hemp is an annual grass, a dioecious plant with small green flowers with a simple perianthus. Male flowers are on short peduncles. Female flowers are grouped in the heart of a common bract, clustered into an ear-shaped inflorescence. The hemp plant blossoms in July and August. The onelobed oval nut is grayishgreen and slightly compressed. The seed occupies the whole inside of the fruit. These fruits have imperceptible netlike fibers, are 4-5 mm long and 3-4 mm wide. They have a sweet, oily taste and a peculiar smell. The seed has no albumen, but contains sugar, resin, fatty oil and mineral salts.

Hemp is usually cultivated for the fibers of its stems, a material which bears the name "hemp", and for the hemp oil contained in hemp fruit (seeds). Hemp is also used for the preparation of a number of narcotic substances. For this purpose, the preparers gather the female inflorescence during blossom time or soon thereafter. Then they separate the large leaves and stems and dry them out. As a result of this process, the ferriferous hair that covers the plant excretes a substance that congeals the plant into a homogeneous mass of a dark brownish-green color which has an intoxicating odour and an unpleasantly bitter taste. This product is usually used for medicinal purposes. There is also another method of preparing narcotics, wherein the preparer gathers the upper parts of fertilized female plants, fruits, chopped leaves and stems. This composition is not good for medicinal purposes and is used instead for the preparation of intoxicating drinks.

The extract from unfertilized female hemp plants is used for preparing hashish, which when chewed or smoked produces an intoxicating and lulling effect which is caused by such narcotic substances as the volatile alkaloid of cannabin, the nonvolatile alkaloid of tetanocannabin, glucozidus cannabin and the amorphic "resin," cannabinol. These substances bring about an increased sensibility, delight, a noisy gaiety, fantasies, enlargement of the pupils, visual and acoustic hallucinations, an accelerated pulse and cramps; this condition is then followed by a state of deep depression and sleep.

Ephedra is a branching, dioecious shrub. The whole plant has a sharp, disgusting taste and contains two alkaloids: ephedrine and pseudoephedrin. Both alkaloids can cause enlargement of the pupils.

The soporific poppy is an annual grass type plant with large flowers that are white, light violet, purple or bright red in color. There is a dark violet or dark red spot in the heart of the flower. The fruit is round or oval and the many seeded pod is sometimes as large as 6 cm in diameter. The seeds are numerous and very small. The plant blossoms in June and July, and the fruit ripens in August. All the plants contain a milkywhite toxic liquid. The seeds are edible but in large amounts can cause a slight narcotic effect. The ripe seeds are used for producing oil and the unripe pods and the dehydrated "milk" are good for making opium. For this purpose the fruits are cut while they are not yet fully developed, some time after the flower reaches a diameter of 3-3.5 cm, and the petals fall. It is quickly dried out, the seeds are taken out and kept in tightly closed vessels. Opium has an unpleasant, highly intoxicating odour and a sharp, bitter taste. It is dissolved in water or is lightly diluted to about half-strength with alcohol. The resulting brownish solution has a sour taste. The dry opium powder contains 10% morphine. The poppy pod contains up to 0.133% of the alkaloids that compose opium and 0.05-0.1% of the alkaloids that compose morphine.

Twenty two alkaloids are taken from opium: morphine, codeine, narsein, tebain, pseudomorphine, papaverin, readin and others. Of all the alkaloids, morphine has the strongest effect on the organism. It paralyzes the cerebral brain and increases the excitement of the reflex nerves in the spinal brain. Codeine blunts the excitement of sensor nerves. Opium and its derivitives are used as pain reducing and calming remedies.

Opium and morphine can cause giddiness, some lolling of the head, depression, drowsiness, the loss of senses and sensibility, muscle paralysis, slowing of pulse and breathing and narrowing of the pupils.

Based on these data, the analysis confirms that the given ceramic vessel was used for keeping various narcotics that had a wide sphere of application. For many ages, different amounts of narcotics have been used for treatment of disease, as pain reducing agents and for temporarily increasing the capacity for work. The find of such a vessel speaks for the high level of knowledge in the preparation of narcotics and also speaks for their ritual use during rites and ceremonies of that time.

APPENDIX II

Analysis of Floral Remains from Togolok21

N. R. Meyer-Melikyan

Organic remains, stone pestles, graters and a bone tube from the excavations of the monumental complex of Togolok21 were sent for analysis at the Chair of Higher Plants of Moscow State University. All samples were received from the central section of the excavated complex and belong to one chronological period. All samples were found in rooms 23 and 34 at the bottom of pithoi and in large vessels that were used for storing liquids. The samples are floral remains: fragment of stems (often with traces of leaves), leaves, microsporangia, pollen grains, anterophors, scraps of megasporangia skin and parts of fruit.

The comparative analysis of the fossil remains and of presentday plants done both with the light microscope and the electron microscope showed that the remains belong to the Ephedra genus. This genus is related to the Ephedraceae family of Gnetopsidea class, which is included in the branch of Gymnospermus plants. It is represented by 40 species that are nowadays mostly distributed in the Mediterranean area, Asia and America. The majority of presentday Ephedra species appear to be low, woody, dioecious bushes that grow in deserts and semideserts and on the steppes. The young stems have numerous small mouths located between ribs.

The vascular system of Ephedra is represented by eustela. The metaxylema consists of tracheidae that have roundedged pores with torso. In the second xylema alongside the tracheidae, there are vessels with pores that merge together and form perforations. The leaves are small, scalelike and fall early. Strobilus are unisexual (dioecious); monoecious plants are rarely found. The male Strobilus consists of a cover made up of two contracted, scalelike leaves and a column (anterophor) that carries from 2 to 8 microsynangia on its tip. The outside of the column is made of unique, very elongated cells. The microsynangia are 2to4 to the nest, and they have small oval openings.

Megastrobilus are found in the base where the leaves are contracted and in most species these bases are dry and scalelike. Some species (Ephedra distachua, for example) have smallmouthed fruit covered with an orange film. The latter are round, lifting at the edge with a thickening of wax. Some Ephedra species are known for their medicinal and intoxicating qualities, due to the presence of the alkaloid ephedrine (Life of Plants, 1978).

The excavated fragments of stems are up to 1 cm long and 13 mm wide and have up to 16 longitudinal ribs. Some of the preserved remains from local species have stems with small oval mouths exactly as in presentday Ephedra. The long axis of the stomatium is located parallel to the stem and the ends are either rounded or slightly pointed.

In the xylema, besides tracheidae, there are vessels with numerous small oval or rounded openings that often merge into a complete perforation. The ribs are formed by cells with thick walls. Some stems bear not only traces of leaves but actual remains of leaves. They are small, filiform, strongly pointed and about 4 mm. long. The morphological and anatomical descriptions of stems bear witness to the fact that the excavated stems and leaves belong to the Ephedra genus.

One can rather often find columns (anterophora) that end in microsynangia. They are formed by very elongated cells that morphologically resemble the cells of presentday Ephedra. The microsynangia are covered by small, isodiametric cells. Some preserved microsynangia have oval, folded and ribbed pollen grains that are characteristic only for the Ephedra genus and for a similar genus, Welwitschia. The latter is represented by the single species of Welwitschia mirabilis grown in the stony deserts of Angola and in tropical southwestern Africa. Such zones of growth for Welwitschia completely exclude the possibility of the appearance of its pollen grains in Central Asia. Thus, the excavated pollen grains can belong only to the Ephedra genus.

The remains also reveal dry scalelike leaves that are contracted at the base. They are very similar to the sterile scalelike leaves that encircle the megastrobilus of presentday Ephedra species. In addition, scales with a bright orange film were isolated from the remains and the electron microscope traced small rounded mouths; and peculiar wax thickenings very much like those of presentday

Ephedra remains were observed. On the whole, the excavated floral remains unquestionably indicate that part of these remains belongs to the Ephedra genus.

The bone tube from room 34 bears the remains that contain threecolpus pollen grains of poppy (Papaver, Papaveraceae family). Some present species are known to have threecolpus pollen grains covered by a characteristic netlike design on the surface (Papaver rhodeas, P. somniferum, P. strigosum, P. hybrid, P. dubium, P. oriental) (Sagdullaeva, 1959; Kalis, 1979; Meyer, Iljina, 1986). Remains of poppy seeds are also found on the pestle from room 38.

Thus, the micro and macrostructure analyses of the floral remains from the Togolok complex testify to the fact that some of the remains belonged to the geniuses of Ephedra and of Poppy (Papaver).

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AFTERWORD

J. P. Mallory
Department of Archaeology-Palaeoecology
Queens University
Belfast, Northern Ireland

Any scholar of the first half of the 19th century would have found it impossible to discuss the origins of the Indo-Europeans without frequent reference to Central Asia. Indeed, for the first half-century of the search for the Indo-European homeland, common opinion was largely agreed that it lay somewhere between northern India and the Aral Sea with the Hindukush and Bactria providing the most frequent candidates (Mallory 1994-95). But by the later 19th century, homelands situated in Europe became far more widely accepted and today most homeland solutions may be found between the Baltic Sea and central Anatolia, including the steppe and forest-steppe of the Pontic-Caspian. The excavations undertaken in Bactria and Margiana, however, have now restored these regions to the centre-place of discussion of Indo-European migrations. While there is only one recent scholar (at least known to me) who has argued in detail that the Indo-European homeland lay in Central Asia (Nichols 1997), there is no question that the region of Bactria and Margiana, especially during the floruit of the Bactrian-Margiana Archaeological Complex (BMAC), is absolutely pivotal in discussing the origins and dispersals of the Indo-Iranians. Nevertheless, the entire question of Indo-Iranian expansions remains one of the great enigmas of Indo-European research since here we find two utterly contradictory solutions to the problem. Before I review this problem briefly, I would like to establish a few basic principles of discussion.

First, we must always keep in mind that the Indo-Iranians are a super-stock of the Indo-European language family and so they must be genetically related to their Indo-European sister stocks, in particular, their closest relations the Slavs, Balts, and perhaps more distantly, the Armenians and Greeks. While the Indo-Iranians have their own story to tell they are only a chapter of a much longer and larger story that involves the dispersals of a language family from the Atlantic coast of Ireland (Celtic) in the west to the great salt marshes of eastern Xinjiang (Tocharian). Throughout the history of Indo-European research, one of the most frequent mistakes in establishing the origins of the various Indo-European peoples is the presumption that one can resolve the origins of any single people (or language) independent of the other Indo-Europeans. The puzzle of Indo-European origins is not like assembling a series of small jig-saw puzzles (each labelled Indo-Aryan, Iranian, Greek, Baltic, etc.) on a flat table; it is more like assembling the blocks of a dome: if there is anything out of place, anything that does not fit or leaves a gap, then the entire edifice collapses. This principle I have termed the "total relationship' principle and it is one of the primary tests of any homeland solution (Mallory 1997). I will have good reason to refer back to this principle later below.

Second, when we first encounter the Indo-Iranians in the written record, they are in motion and moving over territories where we have excellent or at least good circumstantial evidence that their previous occupants were non-Indo-Europeans. The earliest evidence for the Indo-Iranians, specifically Indo-Aryans, occurs in documents relating to the Mitanni of northern Syria where Indo-Aryan loan-words are encountered in the list of the names of deities, people, and in words specifically related to chariotry and horsemanship. The documents date to about the 15th century BC and they reveal an Indo-Aryan influence or, possibly, impact on the Mitanni whose own language was Hurrian, a non-Indo-European language attested from the 3rd millennium B.C. onwards in eastern Anatolia and northern Syria. The Hurrians and the related Urartrians suggest that the region immediately to the west of northern Iran was occupied by non-Indo-European-speaking peoples and while the Hittites of central Anatolia were Indo-European, they occupied a region earlier settled by the Hatti, another non-Indo-European group. To the southwest of Iran lay the Semitic (and formerly Sumerian) states while southern Iran was occupied

by the Elamite language, again non-Indo-European. Determining the language of the Harappan culture of the Indus Valley is controversial but the fact that the Indo-Aryan languages appear to reflect a north to south push over earlier Dravidian languages makes it likely that the Dravidians once occupied a much larger area of India. Moreover, some linguists accept a genetic relationship between Elamite and Dravidian which would pose a common non-Indo-European continuum stretching from southern Iran down into the Indian subcontinent. Territories to the east of Central Asia remain linguistically anonymous and, indeed, it is difficult to demonstrate occupation, or at least substantial occupation, of Xinjiang prior to the Bronze Age c. 2000 B.C. The western Chinese province of Gansu and Tibet, however, are almost universally regarded as territories of the Sinitic languages. Indo-Iranians must have either originated in Central Asia, beyond the regions where historical testimony indicates non-Indo-Europeans, or they must have come from farther beyond, intruders from the north.

Third, archaeologists have generally accepted that there was a major cultural division between the populations who occupied the oases of Central Asia and the populations who occupied the steppelands of the north. This is the widely recognised separation of the peoples of the steppe and those of the sown. Both zones have been claimed to have been ancestral to various groups of Indo-Iranians.

If we consider the steppelands first, we have evidence for steppe populations speaking Iranian languages from the mid 1st millennium B.C. onwards (be it in the writings of Herodotus or the Persian references to the Saka). We can follow the archaeological trail of Eurasian nomads back into the Bronze Age where the Andronovo culture serves as a blanket term for a number of local cultures, that occupied the entire west Asiatic steppe from the Ural river east to the Yenisei in the period c 2000-900 B.C. (Kuzmina 1994). If we paint our cultures into the landscape with a broad brush, we might also include the Sintashta culture of the southern Urals (c 2300-1900 B.C.) with its fortified settlements and princely burials which included some of the earliest evidence for chariots in Eurasia (Gening, V. et al 1992). This has prompted the widely accepted view that the Indo-Iranians first emerged as pastoralists of the west Asiatic steppe. In this model, the steppe = Indo-Iranian or some later stage in the development of the Indo-Iranian languages (In this brief review I do not intend to deal with the specifics of establishing at what particular state of chronological or geographical stage we are dealing with the various stages of Indo-Iranian evolution).

On the other hand we have the exciting evidence of agricultural settlements, fortified citadels, and ritual complexes of Bactria and Margiana during the period of the BMAC. In the multi-roomed religious structures there is clear evidence of both fire altars and rooms for the preparation and consumption of hallucinogenic beverages, both of which match the descriptions of the fire-cult and the consumption of haoma/soma (Proto-Indo-Iranian *sauma-) found in the later liturgical literature of the Zoroastrians of Iran and the Vedic Indians. Artistic motifs seen most abundantly in seals have also been interpreted in light of the religious motifs depicted in the sacred writings of the Indo-Aryans and Iranians. Burials containing BMAC material are also found farther to the south on the main approaches to northern India as one might predict of the immediate ancestors of the Indo-Aryans. This evidence supports a model wherein the prehistoric Indo-Iranians were the occupants of these agricultural citadels, i.e., the Indo-Iranians should be derived not from the steppe but the sown..

How do we reconcile deriving the Indo-Iranians from two regions so different with respect to environment, subsistence, and cultural behaviour? In his discussion of the origins of the BMAC, Prof. Sarianidi argues that its roots lie ultimately within the Near East and Central Asia where the development of irrigation finally permitted the exploitation of the oases of Bactria and Margiana. He emphasises that most of the cultural influences that we find in the Central Asian agricultural settlements derive from neighbouring cultures of the south and west. In a very crude way, the early Bronze Age oasis citadels of Central Asia reflect a push northeastwards of cultures whose roots lie in the Near East.

On the other hand, the steppe cultures of the Sintashta and Andronovo cultures look westwards for their antecedents. Increasingly mobile economies based on stockbreeding had emerged by the 5th and 4th millennium on the European steppe between the Dnieper and the Ural rivers. It is here that we can trace at least one centre for the early domestication of the horse and it is also here that we find the evolution of four-wheeled wagons from the 4th millennium B.C. to the development of spoked-wheeled chari-

ots by c 2000 B.C. on either side of the southern Urals. The immediate cultural antecedents of Sintashta-Andronovo can be found in the Early Bronze Age cultures between the Volga and Ural, e.g., the recently defined Potapovka culture (Vasilyev, I. B. et al 1995). And while the Andronovo culture came to dominate the eastern steppe, the Poltavka and Srubna cultures spread across the European steppe to provide at least one component of the later peoples like the Scythians of the western steppe.

One is then left with two stark choices to reconcile the fact that when we first gain historical records, both the steppe and the sown, both the territory earlier occupied by the Andronovo culture and that settled by the BMAC, are speaking Indo-Iranian languages. Indeed, we can be more specific and note that they speak a northeastern Iranian language, the Iranian subgroup that embraces Scythian, Saka, Bactrian, Sogdian and Avestan. They either came to speak the same language because both regions were genetically related before they established their historical positions or the same languages came to occupy both regions because the language of one of the two zones came to be adopted by the other zone.

Do the Iranians of Central Asia and those of the steppelands have an immediate common origin? This is certainly not a thesis with much, if any, support. Although Gamkrelidze and Ivanov (1984) depict such a development in their massive study of early Indo-Europeans, i.e., their arrow describing the movement of Iranians emerges out of the southwest Caspian and proceeds eastwards around the Caspian and then moves northwards, partly digressing to the east and Bactria (and the territory of the Pamir and Saka languages) while the main thrust of movement moves northwards across the Aral Sea and then turns west again across south Russia and the Ukraine to form the Scythians. But what is the archaeological reality behind this alleged movement? It would seem that one might suggest three possible models.

The first model, temporally the earliest, would be to associate the spread of the neolithic economy from the southeast Caspian (Djebel Cave, etc.) northwards to the southern Urals and then westward across the Volga and toward the Don. This is an old theory, to be found in the works of Danylenko (1974), Merpert (1974) and, most recently, in the writings of G. Matyushin (1986). It hangs by the most slender thread of archaeological comparison, e.g., crudely decorated round-based pottery and early domestic sheep, and it encounters two serious objections: there is no evidence of any neolithic sites intermediate between the southeast Caspian and the steppelands (what we find there is the Kelteminar culture which cannot represent the spread of agriculture to eastern Europe) and, secondly, there are much more proximate sources for the spread of domestic plants and animals across the steppe, e.g., the Caucasus (Shnirelman 1992). Moreover, from a linguistic point of view, this model would require that the Iranians began their expansion about 6000 B.C. and this would render implausible the close relationship between the northeastern Iranian languages (or Indo-Iranian in general which shares a Late Bronze Age cultural vocabulary) when we first encounter them in the historical record.

The second model would suggest that the neolithic economy spread into the steppe zone with the eastward spread of domestic livestock associated with the Bronze Age occupation of Margiana and Bactria. Here, however, we would again face the contrary evidence of domestic livestock well represented on the European steppe by this time (Yamna, Katakomb cultures) and surely the connections both with respect to livestock and certainly material culture and behaviour link the eastern steppelands far more closely with the western steppe than they do the oasis dwellers of Central Asia.

The third model would presume that the oasis communities came to dominate the steppelands socially in the period after 2000 B.C. Here, fortifications in Bactria-Margiana would have served as the inspiration for the emergence of fortified sites in the southern Urals assigned to the Sintashta culture. This is the most promising of the three models in that one might then find an external source for the creation of sites such as Sintashta or Arkhaim. Nevertheless, we again must confront the large territory between the forest-steppe settlements and those of Central Asia and the lack of any substantial evidence for contacts seen in material culture. Furthermore, developments in material such as horse-harnessing gear that we witness in Sintashta can be also found west of the Urals in the Potapovka culture with its earlier roots in the late development of the Yamna culture. In general, there is no obvious way to construct a common origin for the steppe tribes (whose origins lie between the Dnieper and Ural) and those who occupied the oases of Central Asia (whose origins lie south and west of the Caspian). By extension, there

is no way we can find in the two cultural regions grounds to propose a common linguistic ancestor. We are going to get nowhere in reconciling the two different cultural regions by looking to their roots; we must look elsewhere.

If one cannot bring the steppe and the sown together at their point of origin, then we are left to propose that the Indo-Iranian or, more specifically, Iranian language spread as a result of language (and cultural) contact. This raises the issue of the relationship between the steppe tribes, most specifically the Andronovo culture, and the BMAC. The hard archaeological evidence suggests three types of relationships. In the first, we find Andronovo pottery on BMAC settlements which indicates either exchange relations, i.e., the unlikely situation where BMAC settlements imported the cruder hand-made Andronovo pottery, or more probably, direct contacts, i.e., Andronovo communities living within the vicinity of BMAC sites and manufacturing their own pottery there which occasionally found its way onto the BMAC settlements. The second line of evidence for contacts between steppe-oriented and oasis-oriented cultures are the so-called amalgam cultures such as the Bishkent and Vakhsh cultures which exhibit features common to both cultural traditions. Thirdly, there is evidence for the settlement of steppe tribes in Khorezmia, e.g., the Tazabagyab culture, where irrigation agriculture was apparently adopted by communities whose genetic origins are generally sought in the steppeland cultures (Andronovo or Srubna).

Although we may indicate areas of contact between the steppe and the sown, explaining these contacts in social terms is difficult and in Prof. Sarianidi's book they are regarded as peaceful which we may presume suggests that they were linguistically inconsequential. But as we have now seen, unless we can find a common immediate origin for both the Andronovo and BMAC, the relations cannot have been linguistically inconsequential: either the BMAC passed its language to the steppe cultures or the reverse. If neither passed their language to the other, there is no way to explain the presence of Indo-Iranian or later northeastern Iranian languages across the steppe and Central Asia.

It is this logical impasse which forces this writer to entertain the possibility that it was the steppe cultures who linguistically predominated (although not in terms of material culture). That it may have been the reverse, the BMAC or its immediate antecedents, who spread its language northwards is much more difficult to sustain and I have not seen this argued by anyone. And even if one could mount some form of archaeological argument to suggest that the Andronovo culture came under the influence of the BMAC, we would run into the 'total distribution principle' indicated above.

Let us, for the minute, imagine that somehow the Andronovan or later steppe tribes did adopt the language of the BMAC which was some form of Indo-Iranian (Proto-Indo-Iranian, Indo-Aryan or Iranian) language entity. While this might explain the later distribution of the northeast Iranians, where in the world would the Balto-Slavs be at this time? Almost any attempt to model the evolution of the Indo-European languages will result in a family tree that will find the Balto-Slavic languages most closely related to the Indo-Iranian. If we assert that the Proto-Balto-Slavs (or any other European language) was at that time located near their respective historical positions, e.g., somewhere north and west of the Black Sea, how could they possibly be closely related, i.e., shared some of the same immediate linguistic evolution, with a language group that had originated in Central Asia? All linguistic evidence suggests that for a period the Balto-Slavic and Indo-Iranian languages should have been adjacent with one another in a common linguistic continuum before they evolved into their individual language stocks. An indigenous origin of Indo-Iranian in Central Asia or a migration from somewhat farther west in the Near East leaves no room for this continuum. On the other hand, the presumption that this linguistic continuum did once exist right across the steppelands of Eurasia, with Balto-Slavic evolving in the west and the Indo-Iranians developing on the east allows for just such a continuum as the linguistic evidence demands.

Now the evidence that the Andronovo or some other steppe tribes actually seized power in Margiana and Bactria may not be impressive but it is still far better than reversing both the archaeological and linguistic trajectory of populations in the Bronze Age. At least we know that Andronovo communities were in direct contact with the BMAC sites. We know that steppe tribes were settling in Central Asia (Tazabagyab) and we know that what would appear as amalgam of steppe and BMAC tribes were emerging on the

lower reaches of the Amu Darya (Bishkent, Vakhsh cultures). We also know that some of these cultures reveal material or behaviour that is closely linked with that of the Indo-Iranians, e.g., the Bishkent cemetery at Tulkhar (Mandelstam 1968). We also know that the Andronovo culture maintained a vast exchange system involving the extraction and production of bronze metallurgy (Chernykh 1992). And we know from general anthropological observations that when mobile pastoralists come into contact with settled agricultural populations, their ability to accumulate capital and their mobility that permits them to act as middle men between settlements tend to allow them to assume political dominance in local hierarchies (Barth 1981). Finally, we have the later analogy of the empires created in Central Asia by mobile populations such as the Yuehzhi who created the empire of the Kushans (and numerous similar examples culminating with the Turkish dominance of Central Asia) (van Gabain 1979).

The details of the social processes involved have admittedly not been worked out yet although it is far more likely to have involved a process whereby the language of the Andronovans became the language of trade and then the lingua franca of the region rather than the result of the submission of the BMAC sites to Andronovo domination after military conflict. It is far easier for me to account for the spread of the Indo-Iranian languages into the historical seats of the Iranians and Indo-Aryans by a movement from north to south where the nucleus of Indo-Iranian linguistic developments formed in the steppelands and, through some form of symbiosis in Bactria-Margiana, pushed southwards to form the ancient languages of Iran and India.

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